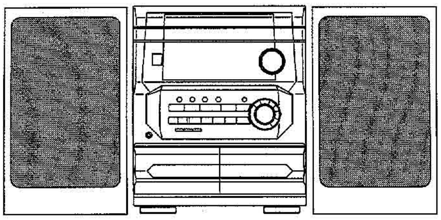
aiwa

aiwa SERVICE

NSX-AV240



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM: 6ZM–3 PR1NM
- BASIC CD MECHANISM: 4ZG–1 Z3RDLSHM

- TYPE: EZ,LH

TYPE	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
EZ	CX – NAV240	SX – NAV224 SX – CR677	RC – ZAS10
LH	CX – NAV240	SX – NS332 SX – CR677	

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1, S/M Code No. 09-983-249-3S2.

S/M Code No. 09–994–402–9R2

SERVICE MANUAL

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SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	LH : 13.2 dBf EZ : 16.8DBf
Antenna terminals	75 ohms (unbalanced)

<AM/MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 uV/m
Antenna	Loop antenna

<LW Tuner section>

EZ :

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 uV/m
Antenna	Loop antenna

<Amplifier section>

Power output <EZ>	**Front** Rated: 20 W + 20 W (6 ohms, T.H.D. 1 %, 1kHz/DIN 45500) Reference: 25 W + 25 W (6 ohms T.H.D. 10%, 1kHz/DIN 45324) DIN MUSIC POWER: 50 W + 50 W **Rear (Surround)** Rated: 10 W + 10 W (8 ohms, T.H.D. 1 %, 1kHz/DIN 45500) Reference: 12.5 W + 12.5 W (8 ohms T.H.D. 10%, 1kHz/DIN 45324) DIN MUSIC POWER: 22.5W + 22.5W **Center** Rated: 20 W (8 ohms, T.H.D. 1 %, 1kHz/DIN 45500) Reference: 25 W (8 ohms, T.H.D. 10 %, 1kHz/DIN 45324) DIN MUSIC POWER: 45 W
Power output <LH>	**Front** Rated: 20 W + 20 W (6 ohms, T.H.D. 1 %, 1kHz) Reference: 25 W + 25 W (6 ohms T.H.D. 10%, 1kHz/) **Rear (Surround)** Rated: 10 W + 10 W (8 ohms, T.H.D. 1 %, 1kHz) Reference: 12.5 W + 12.5 W (8 ohms, T.H.D. 10%, 1kHz) **Center** Rated: 20 W (8 ohms, T.H.D. 1 %, 1kHz) Reference: 25 W (8 ohms, T.H.D. 10 %, 1kHz)
Total harmonic distortion	EZ: 0.05 % (10 W, 1 kHz, 6 ohms, DIN AUDIO) LH: 0.05 % (10 W, 1 kHz, 6 ohms, DIN AUDIO/Front)
Inputs	VIDEO/AUX : 300 mV (adjustable)
Outputs	SPEAKERS : accept speakers of 6 ohms or more SURROUND SPEAKERS : accept speakers of 8 ohms to 16 ohms CENTER SPEAKER : accepts speaker of 8 ohms or more SUBWOOFER : EZ: 1.1 V, LH: 1.2 V PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 15000 Hz
Recording system	AC bias
Heads	Deck 1 : Playback head x 1 Deck 2 : Recording/playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX–NAV224 > (EZ)

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 140 mm cone type Tweeter : 60 mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	240 x 324 x 253 mm
Weight	3.8 kg

<Speaker system SX–NS332 > (LH)

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 120 mm cone type Tweeter : 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	234 x 324 x 270 mm
Weight	2.5 kg

<General>

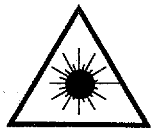
Power requirements	EZ: 230 V AC. 50 Hz LH: 120 V / 220 – 230 V / 240 V AC switchable, 50 / 60 Hz
Power consumption	120 W
Dimensions of main unit (W x H x D)	260 x 330 x 350 mm
Weight of main unit	8.0 kg
Standby power consumption	If the power-economizing mode is OFF: 22 W<EZ>, 19 W<LH> If the power-economizing mode is ON: 2.1 W<EZ>, 2.4 W<LH>

- Design and specifications are subject to change without notice.
- Manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol DD and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

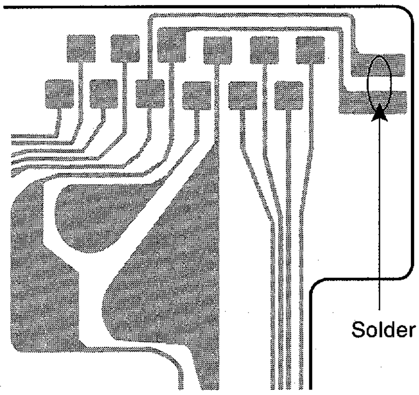
Precaution to replace Optical block

(KSS – 213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK-UP Assy P.C.B



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

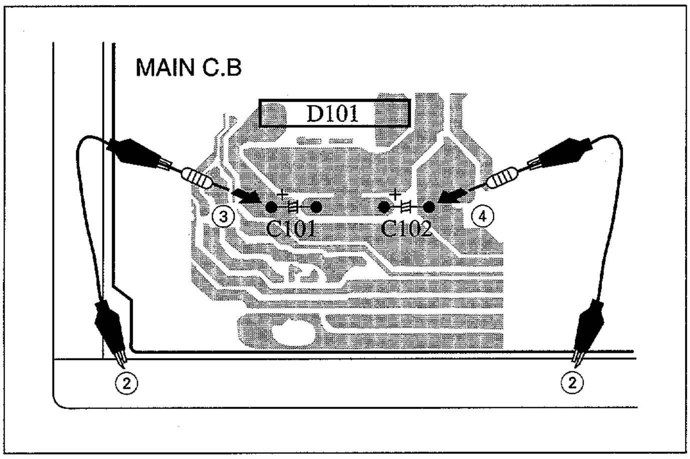


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

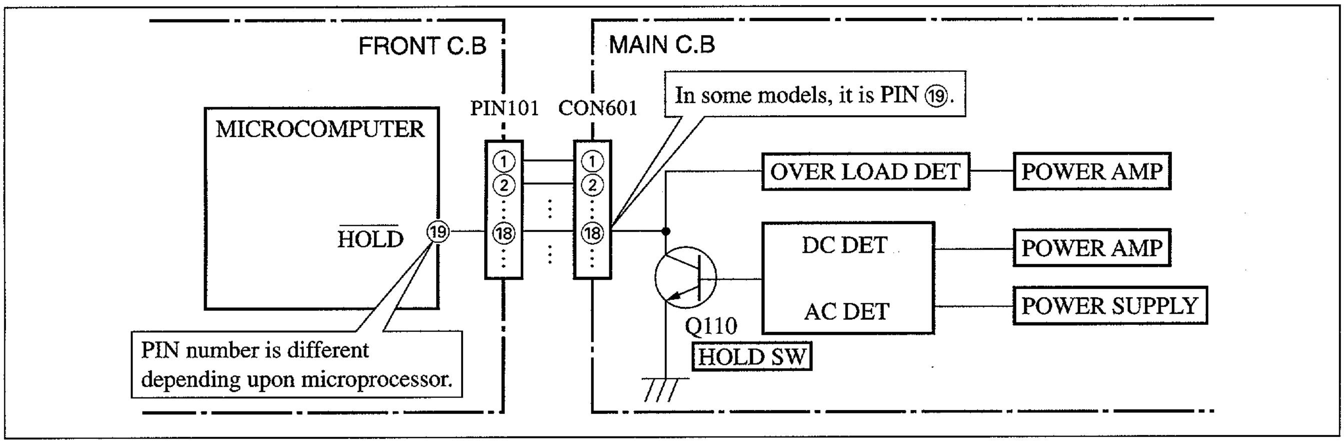
Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.



In some models, it is PIN ⑲.

PIN number is different depending upon microprocessor.

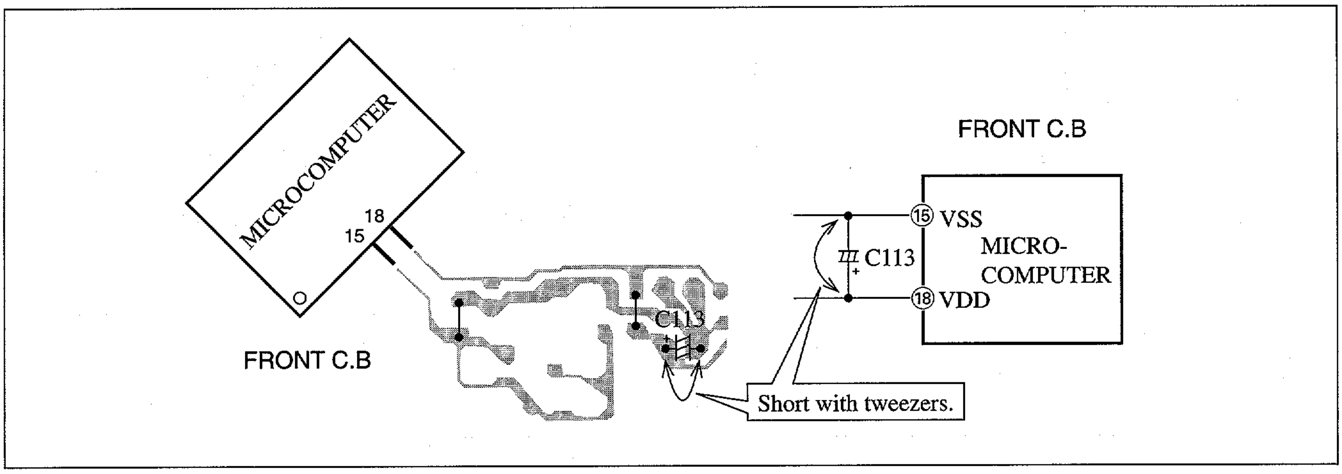
Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.



Short with tweezers.

Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.

③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-020-454-010		IC,DN6851
	87-A20-913-010		IC,LA1837NL
	87-070-127-110		IC,LC72131D
	87-A21-218-010		IC,NJL64H380A
	87-A20-783-040		C-IC,BA7762AFS
	87-A20-440-040		C-IC,BU1920FS
	8Z-NFW-630-010		C-IC,M38B59MFH-E106FP
	87-A21-202-040		C-IC,M62445AFP
	87-A21-097-040		C-IC,M62463AFP
TRANSISTOR			
	87-A30-200-080		TR,2SA1585SR
	87-A30-255-010		TR,2SB1342
	87-A30-214-010		TR,2SB1344
	89-213-702-010		TR,2SB1370 (1.8W)
	89-327-143-080		TR,2SC2714 (0.1W)
	87-A30-196-080		TR,2SC4115SRS
	87-A30-256-010		TR,2SD1933
	87-A30-215-010		TR,2SD2025
	87-A30-190-080		TR,CC5551
	87-A30-318-010		TR,CSA952K
	87-A30-234-080		TR,CSC4115BC
	87-026-245-080		TR,DTC114ES
	87-026-215-080		TR,DTC114YS
	87-026-287-080		TR,DTC143ES
	87-026-609-080		TR,KTA1266GR
	87-A30-241-080		TR,KTA1272Y
	87-026-610-080		TR,KTC3198GR
	87-A30-075-080		C-TR,2SA1235F
	87-A30-076-080		C-TR,2SC3052F
	87-A30-119-040		C-TR,2SC3906K R
	87-A30-257-080		C-TR,2SD1306E
	87-A30-106-070		C-TR,CMBT5551
	87-A30-086-070		C-TR,CSD1306E
	87-A30-142-040		C-TR,DTA123EKA
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-105-080		C-TR,RT1P 441C
	87-A30-087-080		C-FET,2SK2158
	89-505-434-540		C-FET,2SK543(4/5)
	87-A30-090-080		FET,2SK2541
DIODE			
	87-A40-269-080		C-DIODE,MC2836
	87-A40-270-080		C-DIODE,MC2838
	87-020-465-080		DIODE,1SS133 (110MA)
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-224-010		DIODE,GBU8DL
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-336-080		ZENER,MTZJ27D T-72
	87-A40-438-080		ZENER,MTZJ4.7A
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-002-080		ZENER,MTZJ5.1C
	87-A40-234-080		ZENER,MTZJ5.6A
	87-A40-509-080		ZENER,MTZJ6.8C
	87-A40-442-080		ZENER,MTZJ9.1A
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C1	87-012-369-080		C-CAP,S 0.047-50 ZF<EZ>
C2	87-012-369-080		C-CAP,S 0.047-50 ZF<EZ>
C3	87-012-368-080		C-CAP,S 0.1-50 F
C4	87-012-368-080		C-CAP,S 0.1-50 F
C5	87-012-368-080		C-CAP,S 0.1-50 F
C6	87-012-368-080		C-CAP,S 0.1-50 F
C9	87-016-658-090		CAP,E 4700-35 M SMG
C10	87-016-658-090		CAP,E 4700-35 M SMG
C21	87-010-383-080		CAP, ELECT 33-25V M
C22	87-010-383-080		CAP, ELECT 33-25V M
C23	87-010-383-080		CAP, ELECT 33-25V M
C24	87-010-383-080		CAP, ELECT 33-25V M
C25	87-010-430-080		CAP, ELECT 100-63
C26	87-010-263-080		CAP, ELECT 100-10V
C27	87-010-197-080		C-CAP,S 0.01-25 KB
C29	87-010-247-080		CAP, ELECT 100-50V
C30	87-010-112-080		CAP, ELECT 100-16V
C31	87-010-235-080		CAP,E 470-16 SME
C61	87-010-260-080		CAP, ELECT 47-25V
C62	87-010-403-080		CAP, ELECT 3.3-50V
C101	87-010-181-080		C-CAP,S 1800P-50<EZ>
C101	87-010-180-080		C-CAP,S 1500P-50<LH>
C102	87-010-181-080		C-CAP,S 1800P-50<EZ>
C102	87-010-180-080		C-CAP,S 1500P-50<LH>
C103	87-010-401-080		CAP, ELECT 1-50V M
C104	87-010-401-080		CAP, ELECT 1-50V M
C105	87-010-186-080		CAP,CHIP 4700P-50
C106	87-010-186-080		CAP,CHIP 4700P-50
C107	87-010-404-080		CAP, ELECT 4.7-50V M
C108	87-010-404-080		CAP, ELECT 4.7-50V M
C109	87-010-322-080		C-CAP,S 100P-50J CH<EZ>
C110	87-010-322-080		C-CAP,S 100P-50J CH<EZ>
C111	87-010-260-080		CAP, ELECT 47-25V
C112	87-010-260-080		CAP, ELECT 47-25V
C113	87-A10-946-080		C-CAP,S 220P-100 J CH
C114	87-A10-946-080		C-CAP,S 220P-100 J CH
C117	87-A11-236-080		C-CAP,0.22-50 Z F
C118	87-A11-236-080		C-CAP,0.22-50 Z F
C121	87-010-178-080		CHIP CAP 1000P-50 K B
C122	87-010-178-080		CHIP CAP 1000P
C123	87-010-176-080		C-CAP,S 680P-50 J<EZ>
C124	87-010-176-080		C-CAP,S 680P-50 J<EZ>
C125	87-012-368-080		C-CAP,S 0.1-50 F
C126	87-012-368-080		C-CAP,S 0.1-50 F
C127	87-012-368-080		C-CAP,S 0.1-50 F
C128	87-012-368-080		C-CAP,S 0.1-50 F
C129	87-010-191-080		C-CAP,S 0.015-50 Z F<EZ>
C130	87-010-191-080		C-CAP,S 0.015-50 Z F<EZ>
C131	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C132	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>
C133	87-010-197-080		C-CAP,S 0.01-25 K B
C135	87-010-246-080		CAP, ELECT 47-35 M
C136	87-012-368-080		C-CAP,S 0.1-50 F<EZ>
C201	87-010-401-080		CAP, ELECT 1-50V
C202	87-010-401-080		CAP, ELECT 1-50V
C203	87-010-182-080		C-CAP,S 2200P-50 K B
C204	87-010-183-080		C-CAP,S 2700P-50 K B
C209	87-010-246-080		CAP, ELECT 47-35 M SME
C210	87-010-258-080		CAP, ELECT 22-35 M SME
C213	87-010-258-080		CAP, ELECT 22-35 M
C214	87-010-391-080		CAP, ELECT 10-35 M
C215	87-010-322-080		C-CAP,S 100P-50J CH<EZ>
C216	87-010-322-080		C-CAP,S 100P-50J CH<EZ>
C217	87-010-260-080		CAP, ELECT 47-25V
C218	87-010-384-080		CAP, ELECT 100-25 M
C219	87-A10-596-080		C-CAP,S 100P-100 J CH
C220	87-A10-596-080		C-CAP,S 100P-100 J CH
C225	87-A10-712-080		C-CAP,S 0.22-50 Z F
C226	87-A10-712-080		C-CAP,S 0.22-50 Z F
C227	87-010-186-080		CAP,CHIP 4700P
C228	87-010-186-080		CAP,CHIP 4700P
C229	87-010-993-080		C-CAP,S 0.056-25 B
C231	87-010-196-080		C-CAP,S 0.1-25
C233	87-010-190-080		C-CAP,S 0.01-50 Z F<EZ>
C234	87-010-190-080		C-CAP,S 0.01-50 Z F<EZ>
C237	87-010-190-080		C-CAP,S 0.01-50 Z F<EZ>
C238	87-010-322-080		C-CAP,S 100P-50J CH<EZ>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C239	87-010-196-080		C-CAP,S 0.1-25<EZ>
C240	87-015-690-080		CAP, ELECT 22-35 M
C254	87-012-368-080		C-CAP,S 0.1-50 F
C256	87-012-368-080		C-CAP,S 0.1-50 F
C301	87-010-318-080		C-CAP,S 47P-50 CH
C302	87-010-318-080		C-CAP,S 47P-50 CH
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C305	87-012-145-080		CAP, CHIP S 270P CH
C306	87-012-145-080		CAP, CHIP S 270P CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C313	87-010-180-080		CAP,CHIP S 1500-50 K B
C314	87-010-180-080		CAP,CHIP S 1500-50 K B
C315	87-010-182-080		CAP,CHIP 2200-50 K B
C316	87-010-182-080		CAP,CHIP 2200-50 K B
C321	87-016-492-080		C-CAP,S 0.33-16 FZ
C322	87-016-492-080		C-CAP,S 0.33-16 FZ
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P
C355	87-012-349-080		C-CAP,S 1000P-50 CH
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		CAP, CHIP 0.01 DM
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B
C360	87-010-183-080		C-CAP,S 2700P-50 B
C363	87-A10-292-080		CAP,M 5600P-50 J
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C373	87-016-083-080		C-CAP,S 0.15-16 RK
C374	87-016-083-080		C-CAP,S 0.15-16 RK
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C379	87-010-406-080		CAP, ELECT 22-25 M
C380	87-010-406-080		CAP, ELECT 22-25 M
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C388	87-010-170-080		C-CAP,S 220P-50 J
C391	87-010-319-080		C-CAP,S 56P-50 J<LH>
C392	87-010-319-080		C-CAP,S 56P-50 J<LH>
C393	87-010-319-080		C-CAP,S 56P-50 J<LH>
C394	87-010-319-080		C-CAP,S 56P-50 J<LH>
C451	87-010-400-080		CAP, ELECT 0.47-50 M
C452	87-010-400-080		CAP, ELECT 0.47-50 M
C467	87-016-314-080		C-CAP,S 1-16 Z F
C601	87-010-180-080		C-CAP,S 1500P-50 B
C602	87-010-180-080		C-CAP,S 1500P-50 B
C611	87-010-197-080		CAP, CHIP 0.01 DM
C612	87-010-322-080		C-CAP,S 100P-50 J CH
C613	87-016-081-080		C-CAP,S 0.1-16 RK
C614	87-016-081-080		C-CAP,S 0.1-16 RK
C615	88-710-969-810		CAP,M 0.12-50 J
C616	88-710-969-810		CAP,M 0.12-50 J
C617	88-710-869-810		CAP,M 0.068-50 J
C618	88-710-869-810		CAP,M 0.068-50 J
C619	87-010-185-080		C-CAP,S 3900P-50 B
C620	87-010-185-080		C-CAP,S 3900P-50 B
C621	87-010-401-080		CAP, ELECT 1-50V
C622	87-010-401-080		CAP, ELECT 1-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C623	87-A10-307-080		CAP,M 0.1-50 J
C624	87-A10-307-080		CAP,M 0.1-50 J
C628	87-010-322-080		C-CAP,S 100P-50 J CH
C629	87-010-405-080		CAP, ELECT 10-50V
C632	87-010-263-080		CAP, ELECT 100-10V
C633	87-010-263-080		CAP, ELECT 100-10V
C634	87-010-196-080		CHIP CAPACITOR,0.1-25
C635	87-010-196-080		CHIP CAPACITOR,0.1-25
C640	87-010-314-080		C-CAP,S 22P-50V
C641	87-010-196-080		CHIP CAPACITOR,0.1-25
C677	87-010-196-080		CHIP CAPACITOR,0.1-25
C678	87-010-196-080		CHIP CAPACITOR,0.1-25
C801	87-010-176-080		C-CAP,S 680P-50 J SL
C802	87-010-176-080		C-CAP,S 680P-50 J SL
C803	87-010-958-080		C-CAP,S 0.01-25 J B
C804	87-010-958-080		C-CAP,S 0.01-25 J B
C805	87-010-958-080		C-CAP,S 0.01-25 J B
C806	87-010-958-080		C-CAP,S 0.01-25 J B
C807	87-010-401-080		CAP, ELECT 1-50V
C808	87-010-401-080		CAP, ELECT 1-50V
C809	87-010-196-080		C-CAP,S 0.1-25 Z F
C810	87-010-112-080		CAP, ELECT 100-16 M
C811	87-010-493-080		CAP, ELECT 0.47-50 M
C812	87-010-493-080		CAP, ELECT 0.47-50 M
C813	87-010-400-080		CAP, ELECT 0.47-50V
C814	87-010-494-080		CAP, ELECT 1-50 M SL
C817	87-010-221-080		CAP, ELECT 470-10V
C818	87-A10-891-080		CAP, ELECT 4.7-25
C819	87-A10-800-080		C-CAP,S 6800P-16
C820	87-010-374-080		CAP, ELECT 47-10 M
C821	87-010-196-080		C-CAP,S 0.1-25 Z F
C822	87-A10-804-080		C-CAP,S 0.1-25 J B
C824	87-010-374-080		CAP, ELECT 47-10 M
C825	87-010-196-080		C-CAP,S 0.1-25 Z F
C830	87-012-142-080		C-CAP,S 0.33-16 Z F
C831	87-010-971-080		C-CAP,S 4700P-50 J B
C832	87-012-349-080		C-CAP,S 1000P-50 J CH
C833	87-A11-183-080		C-CAP,S 0.12-16 J B
C834	87-A11-182-080		C-CAP,S 0.27-16 J B
C835	87-A11-182-080		C-CAP,S 0.27-16 J B
C836	87-A11-183-080		C-CAP,S 0.12-16 J B
C837	87-010-971-080		C-CAP,S 4700P-50 J B
C838	87-012-349-080		C-CAP,S 1000P-50 J CH
C839	87-010-805-080		C-CAP,S 1-16 Z F
C840	87-010-401-080		CAP, ELECT 1-50V
C841	87-A10-799-080		C-CAP,S 5600P-16 J B
C842	87-A10-802-080		C-CAP,S 0.047-16 J B
C843	87-A10-229-080		C-CAP,S 0.68-10 K W5R
C844	87-012-393-080		C-CAP,S 0.22-16 K W5R
C845	87-012-393-080		C-CAP,S 0.22-16 K W5R
C846	87-010-404-080		CAP, ELECT 4.7-50V
C847	87-010-404-080		CAP, ELECT 4.7-50V
C848	87-012-393-080		C-CAP,S 0.22-16 K
C849	87-012-393-080		C-CAP,S 0.22-16 K
C850	87-016-081-080		C-CAP,S 0.1-16 K R
C851	87-A10-802-080		C-CAP,S 0.047-16 J B
C852	87-A10-802-080		C-CAP,S 0.047-16 J B
C853	87-016-081-080		C-CAP,S 0.1-16 K R
C854	87-016-081-080		C-CAP,S 0.1-16 K R
C855	87-A10-801-080		C-CAP,S 0.022-16 J B
C856	87-A10-801-080		C-CAP,S 0.022-16 J B
C857	87-016-081-080		C-CAP,S 0.1-16 K R
C898	87-010-993-080		C-CAP,S 0.056-25 K B
C899	87-012-368-080		C-CAP,S 0.1-50 Z F
C900	87-012-368-080		C-CAP,S 0.1-50 F
CN301	87-099-827-010		CONN,3P S2M-3W
CN351	87-099-832-010		CONN,8P S2M-8W
CN601	88-NF9-657-010		CONN,30P H BLK TYK-B(X)
CN602	87-A60-131-010		CONN,6P V FE
CN604	87-099-570-010		CONN,13P TUC-P13P-B1<LH>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CN605	87-A60-189-010		CONN,16P V TUC-P16P-B1<EZ>
CNA1	8Z-NF8-670-010		CONN ASSY,7P 480 VH
FB016	87-008-372-080		FLTR,EMI BL01 RN1
FB301	87-008-372-080		FLTR,EMI BL01 RN1<EZ>
FB807	87-008-372-080		FLTR,EMI BL01 RN1
FC602	88-906-251-110		FF-CABLE, 6P 1.25
J201	87-A60-483-010		JACK,DIA6.3 BLK ST W/S
J203	87-A60-238-010		TERMINAL,SP 4P(MSC)
J204	87-A60-752-010		JACK,PIN 4P R/W, O/B
J604	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
L101	87-003-383-010		COIL,1UH-S
L102	87-003-383-010		COIL,1UH-S
L201	87-003-383-010		COIL,1UH-S
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L801	87-003-383-010		COIL,1UH-S
R129	87-A00-258-080		RES,M/F 0.22-1W J
R130	87-A00-258-080		RES,M/F 0.22-1W J
R131	87-A00-258-080		RES,M/F 0.22-1W J
R132	87-A00-258-080		RES,M/F 0.22-1W J
R143	87-A00-440-050		RES,220-1/2W J RP
R144	87-A00-440-050		RES,220-1/2W J RP
R145	87-A00-440-050		RES,220-1/2W J RP
R146	87-A00-440-050		RES,220-1/2W J RP
R165	87-A00-258-080		RES,M/F 0.22-1W J
R166	87-A00-258-080		RES,M/F 0.22-1W J
R231	87-A00-258-080		RES,M/F 0.22-1W J
R232	87-A00-258-080		RES,M/F 0.22-1W J
R233	87-A00-258-080		RES,M/F 0.22-1W J
R234	87-A00-258-080		RES,M/F 0.22-1W J
R265	87-A00-258-080		RES,M/F 0.22-1W J
R266	87-A00-258-080		RES,M/F 0.22-1W J
SFR351	87-A90-433-080		SFR,50K H NVZ6TLTA
SFR352	87-A90-433-080		SFR,50K H NVZ6TLTA
TH101	87-A91-042-080		C-THMS,100K 55001
TH102	87-A91-042-080		C-THMS,100K 55001
TH201	87-A91-042-080		C-THMS,100K 55001
TH202	87-A91-042-080		C-THMS,100K 55001
WH001	87-A90-510-010		HLDR,WIRE 2.5-9P

FRONT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-A11-140-080		CAP,TC U 0.047-50 K B
C151	87-A11-132-080		CAP,TC U 0.01-50 K B
C153	87-010-221-080		CAP, ELECT 470-10V
C201	87-010-421-040		CAP,E 4.7-50 5L
C202	87-010-421-040		CAP,E 4.7-50 5L
C203	87-010-560-040		CAP,E 10-50 GAS
C204	87-010-246-040		CAP,E 47-35 SME
C205	87-018-205-080		CAP, CERA-SOL 0.022
C208	87-A11-242-040		CAP,E 220-10 M 5L
C210	87-010-060-040		CAP,E 100-16
C211	87-A11-242-040		CAP,E 220-10 M 5L
C212	87-018-205-080		CAP, CERA-SOL 0.022
C213	87-015-694-040		CAP,E 0.47-50 M7LSRA
C214	87-A11-155-080		CAP,TC U 0.01-16 Z F
C216	87-018-131-080		CAP, CER 1000P-50V
C217	87-018-125-080		CAP, CER 330P-50V
C218	87-018-125-080		CAP, CER 330P-50V
C219	87-018-131-080		CAP, CER 1000P-50V
C220	87-018-205-080		CAP, CERA-SOL 0.022
C221	87-018-105-080		CAP,TC-U 12P-50 SL
C222	87-018-128-080		CAP, CERA-SOL SS 560P
C224	87-018-205-080		CAP, CERA-SOL 0.022
C230	87-A11-140-080		CAP,TC U 0.047-50 K B
C231	87-015-681-040		E/CAP 10-16
C232	87-A11-140-080		CAP,TC U 0.047-50 K B
C234	87-A11-140-080		CAP,TC U 0.047-50 K B
C241	87-018-117-080		CAP,TC-U 68P-50 SL
C242	87-018-117-080		CAP,TC-U 68P-50 SL
C243	87-018-117-080		CAP,TC-U 68P-50 SL
C244	87-018-117-080		CAP,TC-U 68P-50 SL
C245	87-018-117-080		CAP,TC-U 68P-50 SL
C246	87-018-118-080		CAP,TC-U 82P-50 B
C251	87-018-117-080		CAP,TC-U 68P-50 SL
C252	87-018-131-080		CAP, CER 1000P-50V
C701	87-018-115-080		CAP, CER 47P-50V
CN701	87-099-013-010		CONN,11P 6216 V
CON101	88-NF9-658-010		CONN,30P BLK TYK-B(P)<LH>
CON101	87-099-720-010		CONN,30P BLK TYK-B(P)<EZ>
CON102	87-099-015-010		CONN,13P 6216V
FC102	88-913-221-110		FF-CABLE, 13P 1.25 220MM
FC701	88-911-201-110		FF-CABLE, 11P 1.25
FL301	8Z-NF9-610-010		FL,SVA-10MS12
L201	87-A50-434-010		COIL,CLK 4.19M(TOKO)
LED601	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
LED602	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
LED603	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
LED604	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
LED605	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
LED606	87-A40-266-080		LED,SLH-56VCT31 RED
LED607	87-A40-266-080		LED,SLH-56VCT31 RED
S201	87-A90-535-010		SW,RTRY EC16B24304
S202	87-A90-791-010		SW,RTRY EC16B12204 ENCODER
S301	87-A90-164-080		SW,TACT SKQNAB(N)
S302	87-A90-164-080		SW,TACT SKQNAB(N)
S303	87-A90-164-080		SW,TACT SKQNAB(N)
S304	87-A90-164-080		SW,TACT SKQNAB(N)
S305	87-A90-164-080		SW,TACT SKQNAB(N)
S306	87-A90-164-080		SW,TACT SKQNAB(N)
S307	87-A90-164-080		SW,TACT SKQNAB(N)
S308	87-A90-164-080		SW,TACT SKQNAB(N)
S309	87-A90-164-080		SW,TACT SKQNAB(N)
S310	87-A90-164-080		SW,TACT SKQNAB(N)
S311	87-A90-164-080		SW,TACT SKQNAB(N)<EZ>
S312	87-A90-164-080		SW,TACT SKQNAB(N)
S313	87-A90-164-080		SW,TACT SKQNAB(N)<EZ>
S314	87-A90-164-080		SW,TACT SKQNAB(N)
S315	87-A90-164-080		SW,TACT SKQNAB(N)<EZ>
S316	87-A90-164-080		SW,TACT SKQNAB(N)
S317	87-A90-164-080		SW,TACT SKQNAB(N)
S318	87-A90-164-080		SW,TACT SKQNAB(N)
S319	87-A90-164-080		SW,TACT SKQNAB(N)
S320	87-A90-164-080		SW,TACT SKQNAB(N)
S321	87-A90-164-080		SW,TACT SKQNAB(N)
S322	87-A90-164-080		SW,TACT SKQNAB(N)
S323	87-A90-164-080		SW,TACT SKQNAB(N)
S324	87-A90-164-080		SW,TACT SKQNAB(N)
S325	87-A90-164-080		SW,TACT SKQNAB(N)
S327	87-A90-164-080		SW,TACT SKQNAB(N)
S329	87-A90-164-080		SW,TACT SKQNAB(N)

TUNER C.B <LH>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C701	87-010-381-080		CAP, ELECT 330-16V
C702	87-010-404-080		CAP, ELECT 4.7-50V
C703	87-012-286-080		CAP, U 0.01-25
C704	87-012-286-080		CAP, U 0.01-25
C705	87-A10-592-080		C-CAP,S 0.015-50 J B
C706	87-A10-592-080		C-CAP,S 0.015-50 J B
C709	87-012-195-080		C-CAP,U 100P-50CH
C711	87-010-260-080		CAP, ELECT 47-25V
C712	87-010-831-080		C-CAP,U,0.1-16F
C714	87-012-286-080		CAP, U 0.01-25
C717	87-012-286-080		CAP, U 0.01-25
C718	87-012-179-080		C-CAP,U 20P-50 CH
C719	87-012-286-080		CAP, U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH
C721	87-012-176-080		CAP 15P

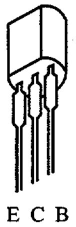
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C722	87-012-176-080		CAP 15P
C723	87-012-274-080		CHIP CAP,U 1000P-50B
C725	87-012-274-080		CHIP CAP,U 1000P-50B
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP, ELECT 220-10V
C729	87-012-274-080		CHIP CAP,U 1000P-50B
C731	87-012-286-080		CAP, U 0.01-25
C733	87-010-987-080		C-CAP,S 1500P-50 CH
C734	87-010-987-080		C-CAP,S 1500P-50 CH
C735	87-010-987-080		C-CAP,S 1500P-50 CH
C736	87-010-987-080		C-CAP,S 1500P-50 CH
C737	87-A10-592-080		C-CAP,S 0.015-50 J B
C738	87-A10-592-080		C-CAP,S 0.015-50 J B
C751	87-012-365-080		C-CAP,S 0.027-25VBK
C752	87-012-365-080		C-CAP,S 0.027-25VBK
C756	87-012-286-080		CAP, U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH
C758	87-012-167-080		C-CAP,U 5P-50 CH
C763	87-010-829-080		CAP, U 0.047-16
C764	87-012-337-080		C-CAP,U 56P-50 CH
C765	87-012-286-080		CAP, U 0.01-25
C768	87-012-286-080		CAP, U 0.01-25
C769	87-010-260-080		CAP, ELECT 47-25V
C770	87-010-829-080		CAP, U 0.047-16
C771	87-010-383-080		CAP, ELECT 33-25V
C772	87-010-829-080		CAP, U 0.047-16
C773	87-010-196-080		CHIP CAPACITOR,0.1-25
C774	87-010-263-080		CAP, ELECT 100-10V
C775	87-010-404-080		CAP, ELECT 4.7-50V
C776	87-012-286-080		CAP, U 0.01-25
C777	87-010-400-080		CAP, ELECT 0.47-50V
C778	87-010-401-080		CAP, ELECT 1-50V
C779	87-010-401-080		CAP, ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C781	87-010-405-080		CAP, ELECT 10-50V
C782	87-010-405-080		CAP, ELECT 10-50V
C783	87-012-286-080		CAP, U 0.01-25
C784	87-012-286-080		CAP, U 0.01-25
C785	87-010-401-080		CAP, ELECT 1-50V
C786	87-010-401-080		CAP, ELECT 1-50V
C789	87-012-275-080		C-CAP,U 1200P-50 B
C790	87-012-275-080		C-CAP,U 1200P-50 B
C791	87-010-405-080		CAP, ELECT 10-50V
C793	87-012-273-080		C-CAP,U 820P-50 B
C794	87-010-406-080		CAP, ELECT 22-50
C795	87-010-596-080		CAP, S 0.047-16
C796	87-010-403-080		CAP, ELECT 3.3-50V
C799	87-010-829-080		CAP, U 0.047-16
C812	87-012-286-080		CAP, U 0.01-25
C820	87-010-260-080		CAP, ELECT 47-25V
C821	87-012-286-080		CAP, U 0.01-25
C822	87-012-286-080		CAP, U 0.01-25
C823	87-012-286-080		CAP, U 0.01-25
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C961	87-012-170-080		C-CAP,U 8P-50 CH
C963	87-010-196-080		CHIP CAPACITOR,0.1-25
CF801	87-008-261-010		FILTER, SFE10.7MA5-A
CF802	87-008-261-010		FILTER, SFE10.7MA5-A
CN701	87-A60-700-010		CONN,13P H GRY TUC-P13X-C1
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM
J801	87-A60-702-010		TERMINAL,ANT 4P CJ-9036
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-733-010		FLTR,PCFAZH-450 (TOK)
L981	87-NF4-650-010		COIL,AM PACK 4N(TOK)
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309PT C.B

TUNER C.B <EZ>

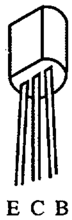
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C701	87-010-381-080		CAP,ELECT 330-16V
C702	87-010-404-080		CAP,ELECT 4.7-50V
C703	87-012-286-080		CAP,U 0.01-25
C704	87-012-286-080		CAP,U 0.01-25
C709	87-012-195-080		C-CAP,U 100P-50CH
C711	87-010-260-080		CAP,ELECT 47-25V
C712	87-010-831-080		C-CAP,U,0.1-16F
C713	87-012-286-080		CAP,U 0.01-25
C714	87-012-286-080		CAP,U 0.01-25
C715	87-012-195-080		C-CAP,U 100P-50CH
C717	87-012-286-080		CAP,U 0.01-25
C719	87-012-286-080		CAP,U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH
C721	87-012-176-080		CAP,15P
C722	87-012-176-080		CAP,15P
C723	87-012-274-080		CHIP CAP,U 1000P-50B
C725	87-018-131-080		CAP,TC U 1000P-50 KB
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP,ELECT 220-10V
C729	87-012-274-080		CHIP CAP,U 1000P-50B
C731	87-012-286-080		CAP,U 0.01-25
C733	87-012-280-080		C-CAP,U 3300P-50 KB
C734	87-012-280-080		C-CAP,U 3300P-50 KB
C752	87-012-282-080		C-CAP,U 4700P-50 KB
C753	87-012-195-080		C-CAP,U 100P-50 J CH
C755	87-012-286-080		CAP,U 0.01-25
C756	87-012-286-080		CAP,U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH
C758	87-012-167-080		C-CAP,U 5P-50 CH
C761	87-010-196-080		C-CAP,S 0.1-25 ZF
C762	87-012-286-080		CAP,U 0.01-25
C763	87-010-829-080		CAP,U 0.047-16
C765	87-012-286-080		CAP,U 0.01-25
C766	87-010-197-080		C-CAP,S 0.01-25 KB
C768	87-012-286-080		CAP,U 0.01-25
C769	87-010-260-080		CAP,ELECT 47-25V
C770	87-010-829-080		CAP,U 0.047-16
C771	87-010-383-080		CAP,ELECT 33-25V
C772	87-010-829-080		CAP,U 0.047-16
C773	87-010-196-080		CHIP CAPACITOR,0.1-25
C774	87-010-263-080		CAP,ELECT 100-10V
C775	87-010-404-080		CAP,ELECT 4.7-50V
C776	87-012-286-080		CAP,U 0.01-25
C777	87-010-493-080		CAP,E 0.47-50 M 5L SRE
C778	87-010-401-080		CAP,ELECT 1-50V
C779	87-010-401-080		CAP,ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C781	87-010-405-080		CAP,ELECT 10-50V
C782	87-010-405-080		CAP,ELECT 10-50V
C783	87-012-286-080		CAP,U 0.01-25
C784	87-012-286-080		CAP,U 0.01-25
C785	87-010-401-080		CAP,ELECT 1-50V
C786	87-010-401-080		CAP,ELECT 1-50V
C787	87-012-275-080		C-CAP,U 1200P-50 B
C788	87-012-275-080		C-CAP,U 1200P-50 B
C789	87-012-275-080		C-CAP,U 1200P-50 B
C790	87-012-275-080		C-CAP,U 1200P-50 B
C791	87-010-405-080		CAP,ELECT 10-50V
C793	87-012-273-080		C-CAP,U 820P-50 B
C794	87-010-406-080		CAP,ELECT 22-50
C795	87-010-596-080		CAP,S 0.047-16
C796	87-010-403-080		CAP,ELECT 3.3-50V
C797	87-012-276-080		C-CAP,U 1500P-50 KB
C798	87-012-276-080		C-CAP,U 1500P-50 KB
C799	87-010-829-080		CAP,U 0.047-16
C812	87-012-286-080		CAP,U 0.01-25
C814	87-012-286-080		CAP,U 0.01-25
C820	87-010-260-080		CAP,ELECT 47-25V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C821	87-012-286-080		CAP,U 0.01-25
C822	87-012-286-080		CAP,U 0.01-25
C823	87-012-286-080		CAP,U 0.01-25
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-012-286-080		C-CAP,U 0.01-25 KB
C861	87-012-199-080		C-CAP,U 220P-50 J CH
C862	87-012-199-080		C-CAP,U 220P-50 J CH
C863	87-012-270-080		C-CAP,U 470P-50 KB
C864	87-010-405-080		CAP,E 10-50 M 11L SME
C865	87-010-196-080		C-CAP,S 0.1-25 ZF
C866	87-010-405-080		CAP,E 10-50 M 11L SME
C867	87-012-286-080		C-CAP,U 0.01-25 KB
C868	87-012-184-080		C-CAP,U 33P-50 J CH
C869	87-012-180-080		C-CAP,U 22P-50 J CH
C940	87-012-286-080		C-CAP,U 0.01-25 KB
C942	87-012-172-080		C-CAP,U 10P-50 D CH
C947	87-012-286-080		C-CAP,U 0.01-25 KB
C949	87-A10-039-080		C-CAP,U 470P-50 J CH
C952	87-012-286-080		C-CAP,U 0.01-25 KB
C958	87-010-197-080		C-CAP,S 0.01-25 KB
C959	87-010-831-080		C-CAP,U 0.1-16 ZF
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C962	87-010-401-080		CAP,E 1-50 M 11L SME
CF801	87-008-423-010		FLTR,CF SFE10.7MS3G-A
CF802	82-785-747-010		CF,MS2 GHY R
CN701	87-A60-650-010		CONN,16P H GRY TUC-P16X-C1
FFE801	A8-6ZA-191-130		6ZA-1 FEENM
J801	87-033-241-010		TERMINAL,ANT 2P AJ-2039
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A90-733-010		FLTR,PCFAZH-450(TOK)
L781	87-005-847-010		COIL,2.2UH K CECS
L791	87-A50-027-010		COIL,1 POLE MPX(TOK)
L792	87-A50-027-010		COIL,1 POLE MPX(TOK)
L832	87-005-847-080		COIL,2.2UH K CECS
L851	87-005-847-080		COIL,2.2UH K CECS
L941	87-A50-020-010		COIL,ANT LW(COI)252KHZ
L942	87-A50-019-010		COIL,OSC LW(COI) 856KHZ
L981	87-NF4-651-110		COIL,AM PACK 2N(TOM)
TC942	87-011-164-010		TRIMMER,CER 30P 4.5X3.9 VCT31
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X851	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309
PT C.B			
C001	87-010-387-080		CAP,E 470-25 SME
C004	87-010-403-080		CAP,E 3.3-50 M SME
CN001	87-A60-850-010		CONN,7P V VH
⚠PT001	8Z-NFW-604-010		PT,ZNF-W LH<LH>
⚠PT001	8Z-NFW-603-010		PT,ZNF-W EKZ<EZ>
⚠PT002	8Z-NF8-663-010		PT,SUB ZNF-8(H)<LH>
⚠PT002	8Z-NF8-662-010		PT,SUB ZNF-8(E)<EZ>
⚠RY001	87-A90-976-010		RELAY,AC12V SDT-S-112LMR<EZ>
⚠RY002	87-A91-281-010		RELAY,AC DC12V OSA-SS-212<LH>
⚠S001	87-A90-165-010		SW,SL 1-2-3 SWS2301<LH>
⚠T001	87-A60-317-010		TERMINAL, 1P MSC
⚠T002	87-A60-317-010		TERMINAL, 1P MSC
DECK C.B			
CN105	87-099-753-019		CONN,11P 9604
CON301	86-ZM3-604-219		CON ASSY,3P-PB
CON351	86-ZM3-605-119		CON ASSY,8P-PB
SFR1	87-024-581-019		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-410		SOL ASSY, 27
SOL2	82-ZM1-618-410		SOL ASSY, 27
SW1	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW2	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW3	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW4	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW5	87-A90-248-019		SW,MICRO ESE11SH2CXQ
W001	82-ZM1-632-019		REN-CORD,4P-120MM00

TRANSISTOR ILLUSTRATION



CSA952K
KTA1266GR
KTC3198GR



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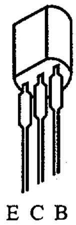

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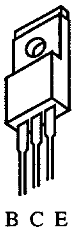
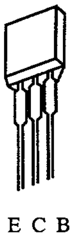
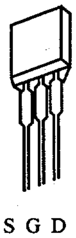


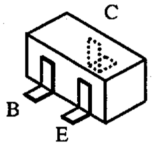
2SB1342
2SB1344
2SB1370
2SD1933
2SD2025



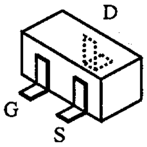
2SA1585SR
2SC4115SRS
DTC114ES
DTC114YS
DTC143ES
KTA1272Y



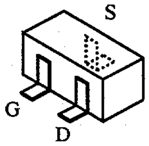
2SK2541



2SA1235F
2SC2714
2SC3052F
2SC3906KR
2SD1306E
CMBT5551
CSD1306
DTA123EKA
RT1P141C
RT1P144C
RT1P441C



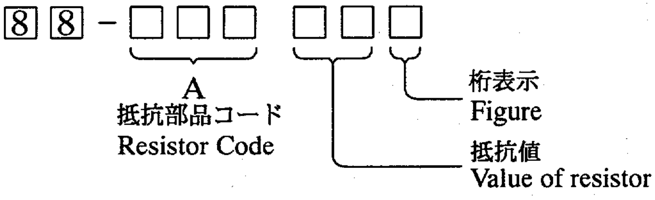
2SK2158



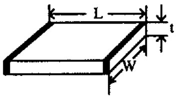
2SK543

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

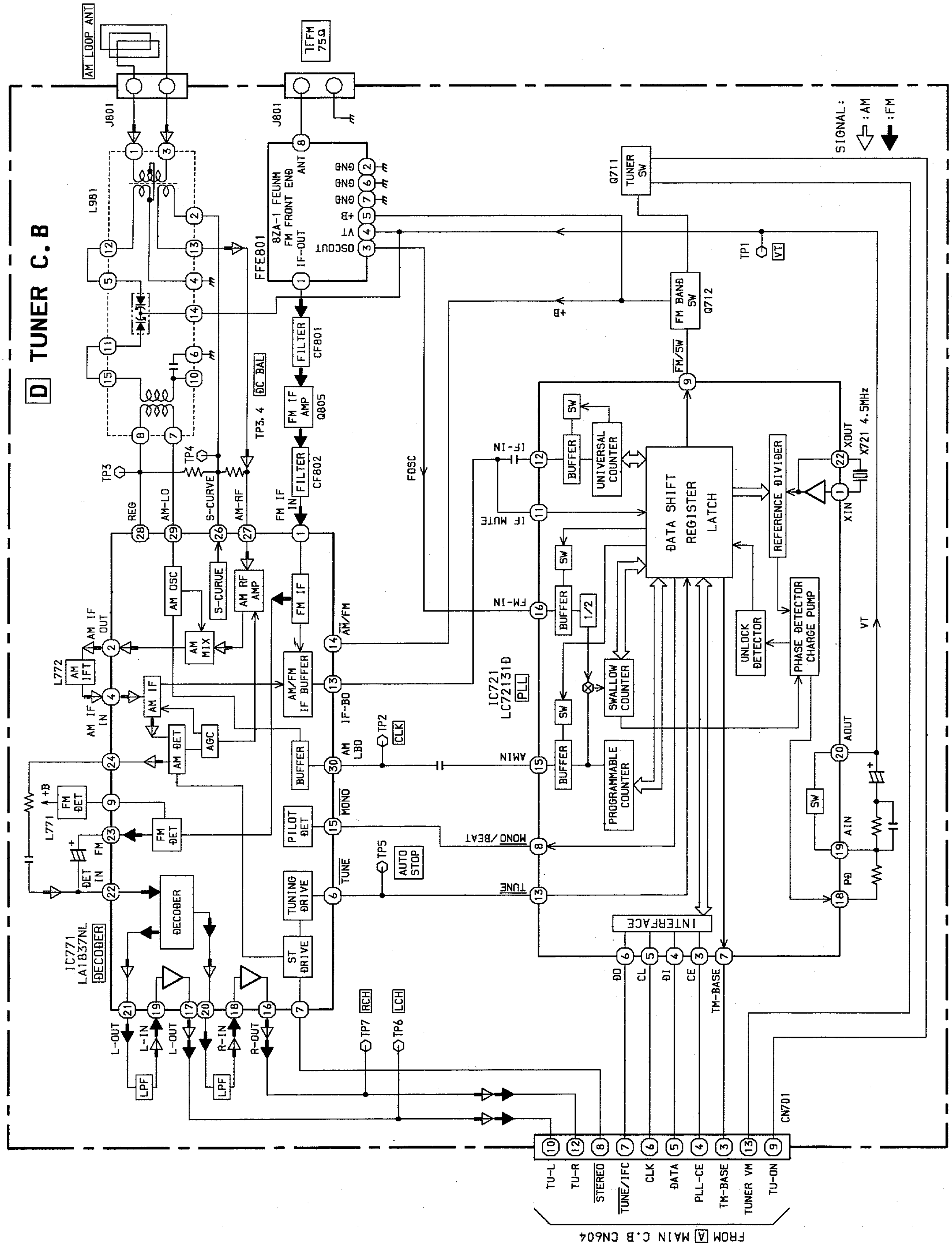
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding


8 8 - □□□ □□□
A
抵抗部品コード
Resistor Code
桁表示
Figure
抵抗値
Value of resistor

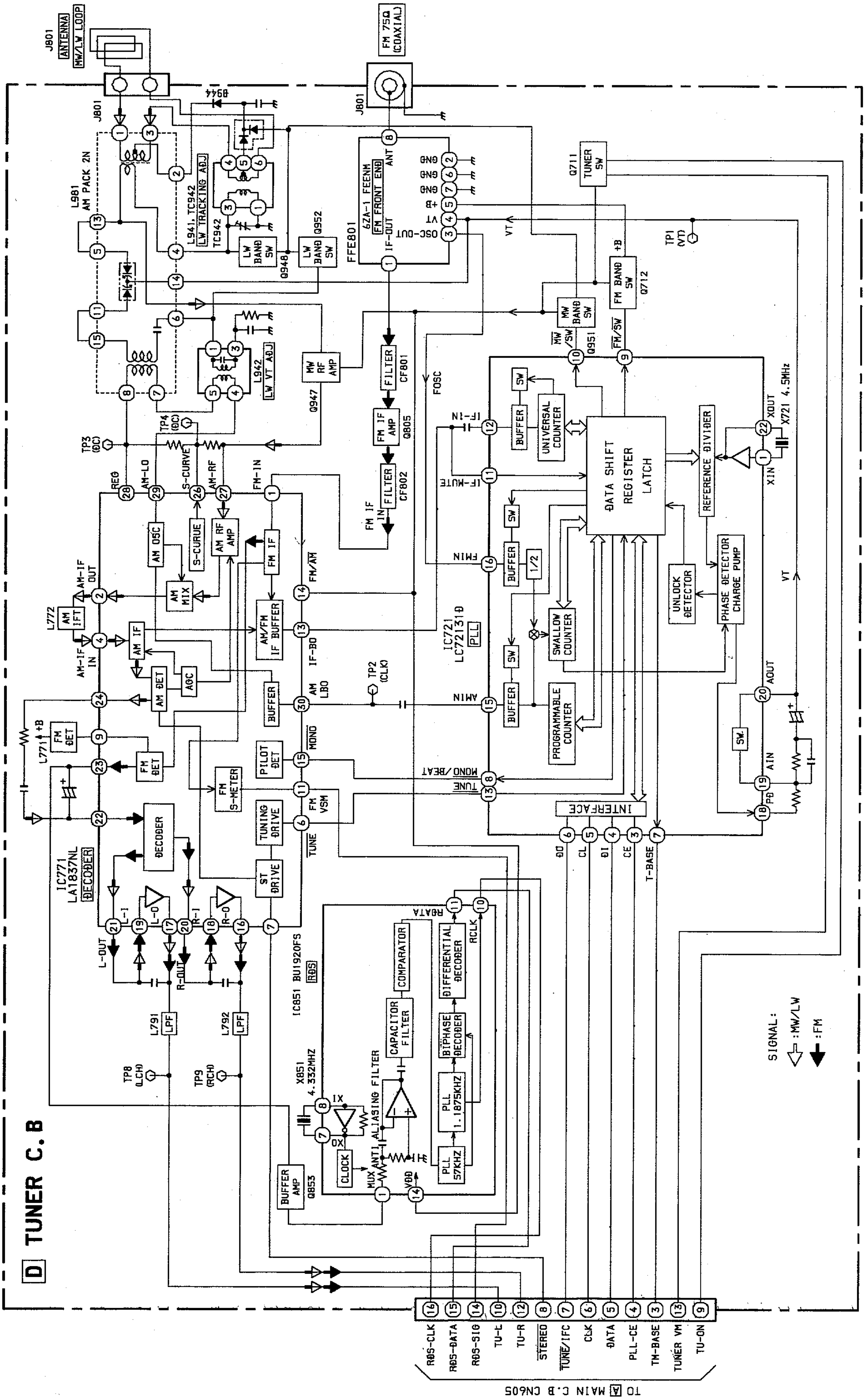
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

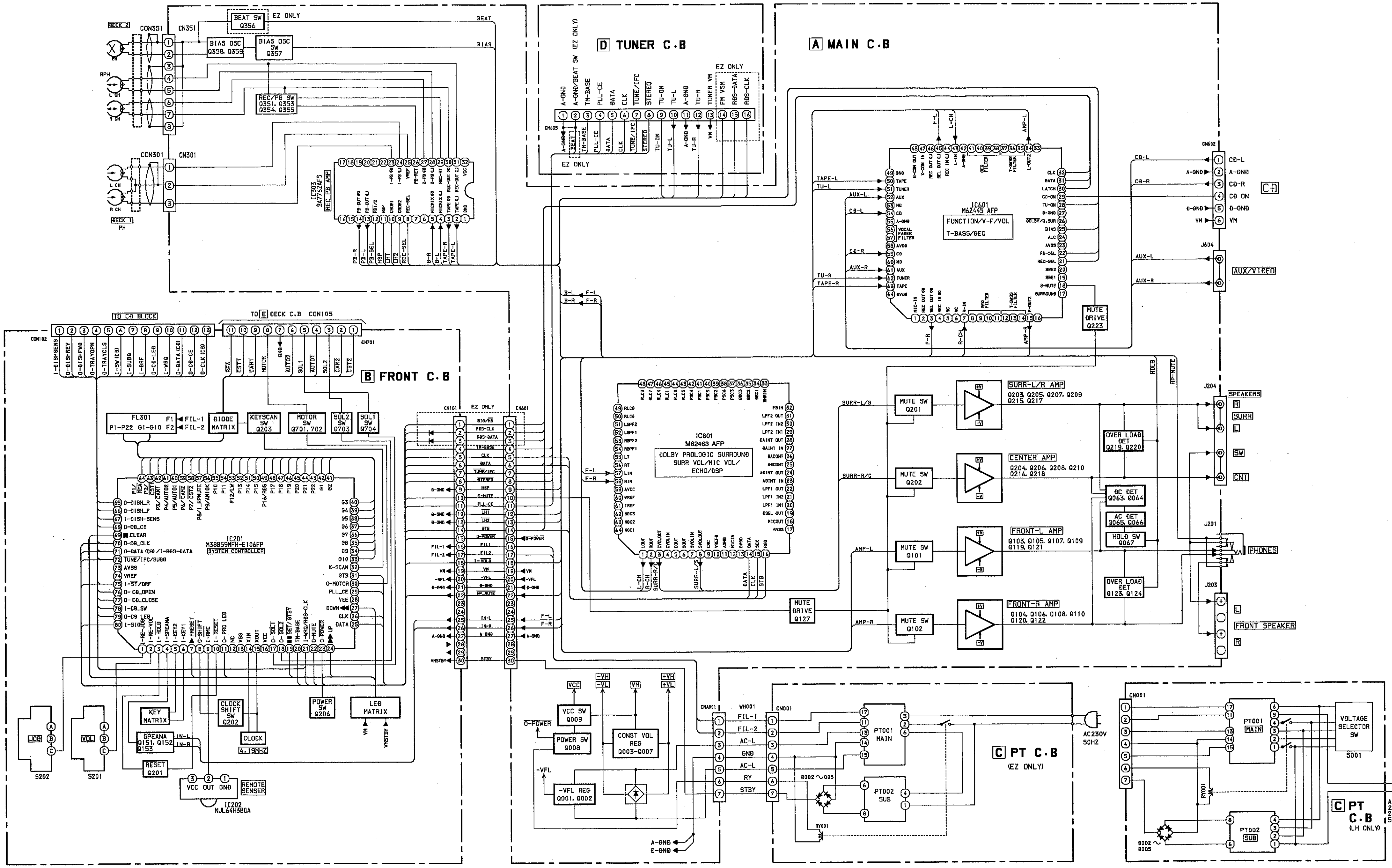
BLOCK DIAGRAM – 1 (TUNER : LH)


D TUNER C.B
AM LOOP ANT
FM 75Ω
J801
L981
FFE801
8ZA-1 FEUNM
FM FRONT END
ANT
GND
B+
VT
OSCOUT
IF-OUT
FILTER
CF801
FM IF AMP
Q805
CF802
TP3.4
DC BAL
TP3
TP4
REG
AM-LO
S-CURVE
AM-RF
FM IF IN
AM OSC
S-CURVE
AM RF AMP
FM IF
AM MIX
AM/FM IF BUFFER
AM/FM
IF-BO
AM IF OUT
L772
AM IFT
AM IF IN
AM IF
AGC
AM DET
BUFFER
AM LBO
TP2
CLK
FM DET
L771
+B
FM DET IN
PILOT DET
MONO
TUNING DRIVE
TUNE
TP5
AUTO STOP
DECODER
ST DRIVE
IC771
LA1837NL
DECODER
L-OUT
L-IN
R-IN
R-OUT
LPF
TP7
RCH
TP6
LCH
FOSC
IF-IN
IF MUTE
FM-IN
AMIN
MONO/BEAT
TUNE
BUFFER
SW
UNIVERSAL COUNTER
1/2
SWALLOW COUNTER
PROGRAMMABLE COUNTER
DATA SHIFT REGISTER LATCH
IC721
LC72131D
PLL
UNLOCK DETECTOR
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
XOUT
X721 4.5MHz
XIN
AOUT
AIN
PD
VT
INTERFACE
DO
CL
DI
CE
TM-BASE
FM/SW
FM BAND SW
Q712
+B
Q711
TUNER SW
TP1
VT
SIGNAL:
:AM
:FM
CN701
TU-L
TU-R
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
TUNER VM
TU-ON
FROM A MAIN C.B CN604

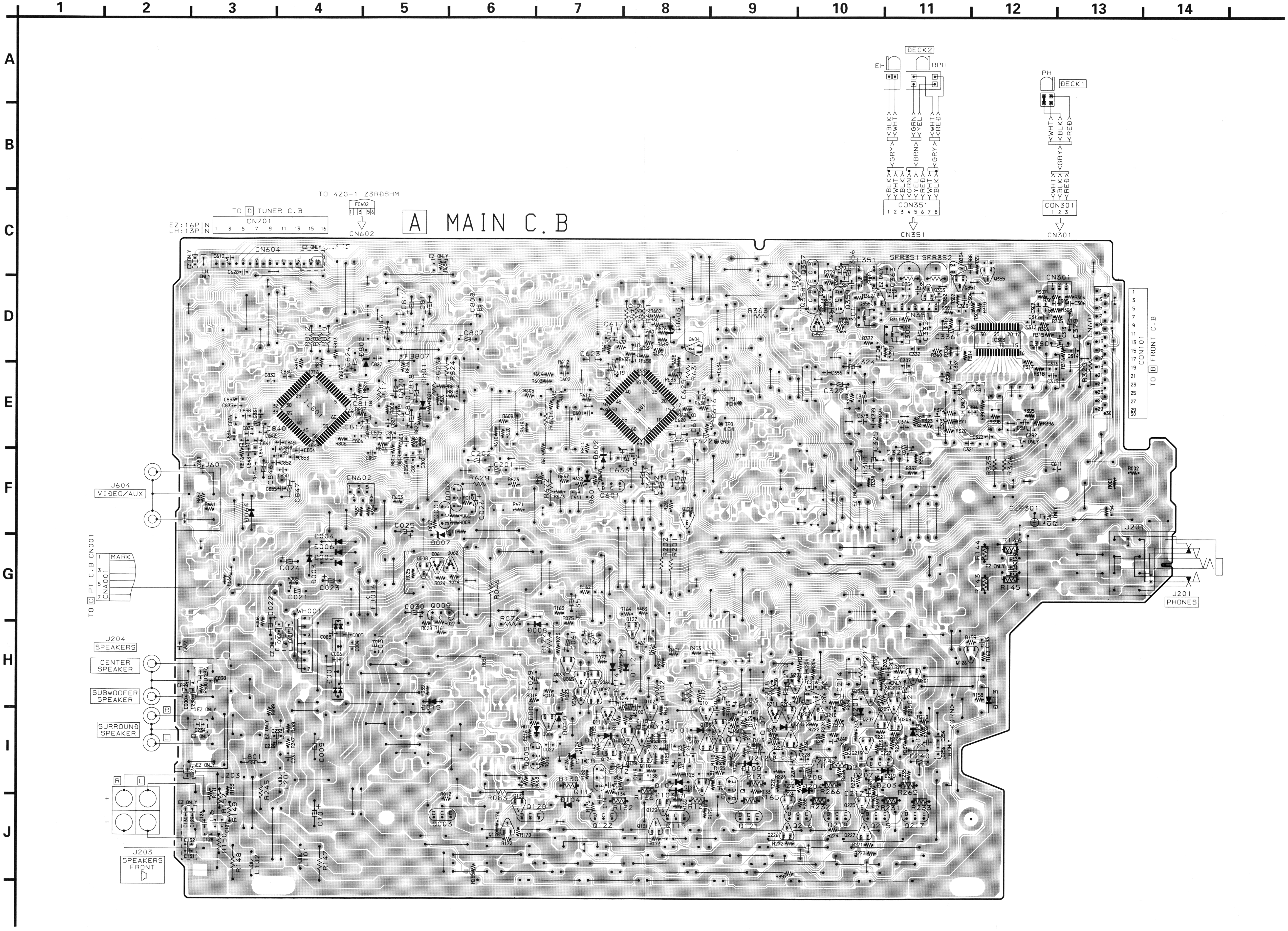
BLOCK DIAGRAM – 2 (TUNER : EZ)


D TUNER C.B
J801
ANTENNA
MW/LW LOOP
FM 75Ω (COAXIAL)
D944
L981 AM PACK 2N
L941,TC942 LW TRACKING ADJ
TC942
LW BAND SW
Q948
LW BAND SW
Q952
FFE801
6ZA-1 FEENM
FM FRONT END
ANT
GND
+B
VT
IF-OUT
OSC-OUT
Q711
TUNER SW
TP1 (VT)
FM BAND SW
Q712
MW BAND SW
Q951
MW/SW
FM/SW
L942 LW VT ADJ
MW RF AMP
Q947
FILTER CF801
FM IF AMP Q805
FILTER CF802
FM IF IN
FOSC
TP3 (DC)
TP4 (DC)
REG
AM-LO
S-CURVE
AM-RF
FM-IN
AM OSC
S-CURVE
AM RF AMP
FM IF
AM MIX
AM/FM IF BUFFER
FM/AM
IF-BO
AM IF
AGC
AM DET
BUFFER
AM LBO
TP2 (CLK)
L772
AM IFT
AM-IF OUT
AM-IF IN
L771
FM DET
FM DET
FM S-METER
PILOT DET
MONO
FM VSM
TUNE
TUNING DRIVE
ST DRIVE
DECODER
IC771 LA1837NL DECODER
L-I
L-O
R-I
R-O
L-OUT
R-OUT
L791 LPF
L792 LPF
TP8 (LCH)
TP9 (RCH)
IC721 LC72131D PLL
IF-IN
IF-MUTE
FMIN
AMIN
BUFFER
SW
UNIVERSAL COUNTER
1/2
SWALLOW COUNTER
PROGRAMMABLE COUNTER
DATA SHIFT REGISTER LATCH
REFERENCE DIVIDER
UNLOCK DETECTOR
PHASE DETECTOR CHARGE PUMP
XOUT
XIN
X721 4.5MHz
AOUT
AIN
PD
VT
MONO/BEAT
TUNE
INTERFACE
DO
CL
DI
CE
T-BASE
IC851 BU1920FS RDS
X851 4.332MHZ
ANTI ALIASING FILTER
CAPACITOR FILTER
COMPARATOR
BIPHASE DECODER
DIFFERENTIAL DECODER
PLL 1.1875KHZ
PLL 57KHZ
CLOCK
MUX
VDD
IX
OX
RDATA
RCLK
BUFFER AMP Q853
SIGNAL:
:MW/LW
:FM
RDS-CLK
RDS-DATA
RDS-SIG
TU-L
TU-R
STEREO
TUNE/IFC
CLK
DATA
PLL-CE
TM-BASE
TUNER VM
TU-ON
TO A MAIN C.B CN605

BLOCK DIAGRAM – 3 (MAIN / FRONT / PT)


DECK 2
CON351
CN351
BEAT SW Q356
EZ ONLY
BIAS OSC Q358, Q359
BIAS OSC SW Q357
REC/PB SW Q351, Q353 Q354, Q355
CON301
CN301
DECK 1
PH
IC303 BA7765AFS REC/PB AMP
D TUNER C·B
A MAIN C·B
IC601 M62445 AFP
FUNCTION/V-F/VOL
T-BASS/GEQ
CD
AUX/VIDEO
MUTE DRIVE Q223
TO CD BLOCK
TO E DECK C.B CON105
CN701
B FRONT C·B
FL301
DIODE MATRIX
KEYSCAN SW Q203
MOTOR SW Q701, 702
SOL2 SW Q703
SOL1 SW Q704
IC201 M38B59MFH-E106FP
SYSTEM CONTROLLER
CN101
CN651
IC801 M62463 AFP
DOLBY PROLOGIC SURROUND SURR VOL/MIC VOL/ ECHO/DSP
MUTE DRIVE Q127
MUTE SW Q201
MUTE SW Q202
MUTE SW Q101
MUTE SW Q102
SURR-L/R AMP Q203, Q205, Q207, Q209 Q215, Q217
CENTER AMP Q204, Q206, Q208, Q210 Q216, Q218
FRONT-L AMP Q103, Q105, Q107, Q109 Q119, Q121
FRONT-R AMP Q104, Q106, Q108, Q110 Q120, Q122
OVER LOAD DET Q219, Q220
DC DET Q063, Q064
AC DET Q065, Q066
HOLD SW Q067
OVER LOAD DET Q123, Q124
SPEAKERS
SURR
SW
CNT
PHONES
FRONT SPEAKER
KEY MATRIX
SPEANA Q151, Q152 Q153
RESET Q201
CLOCK SHIFT SW Q202
CLOCK 4.19MHZ
POWER SW Q206
LED MATRIX
JOG
VOL
S202
S201
REMOTE SENSER
IC202 NJL64H380A
VCC SW Q009
POWER SW Q008
CONST VOL REG Q003-Q007
-VFL REG Q001, Q002
PT001 MAIN
PT002 SUB
AC230V 50HZ
C PT C·B
(EZ ONLY)
VOLTAGE SELECTOR SW S001
C PT C·B (LH ONLY)
AC120V/ 220-230V/ 240V 50/60HZ

WIRING – 1 (MAIN)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
DECK2
EH
RPH
PH
DECK1
<BLK>
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<GRY>
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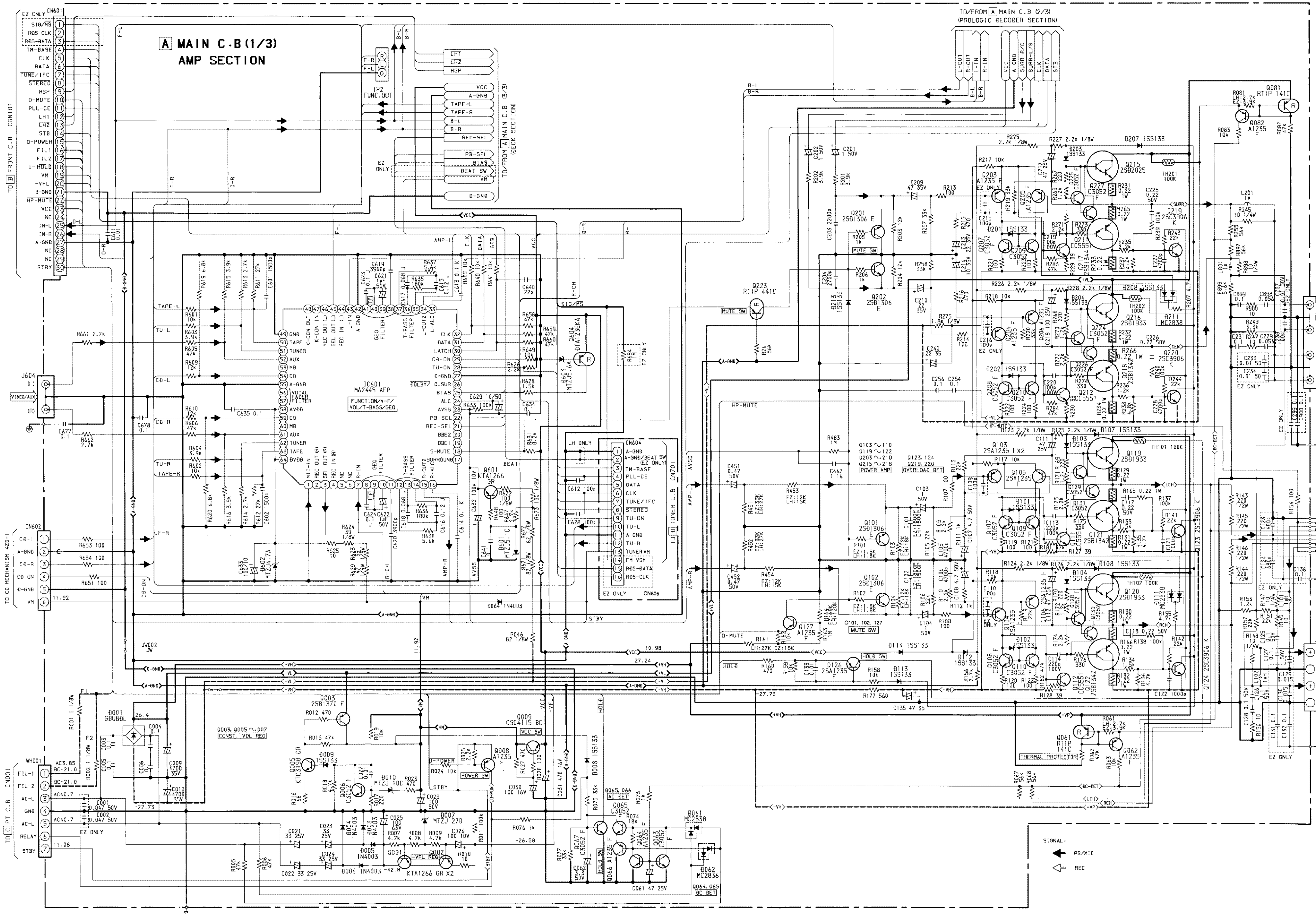
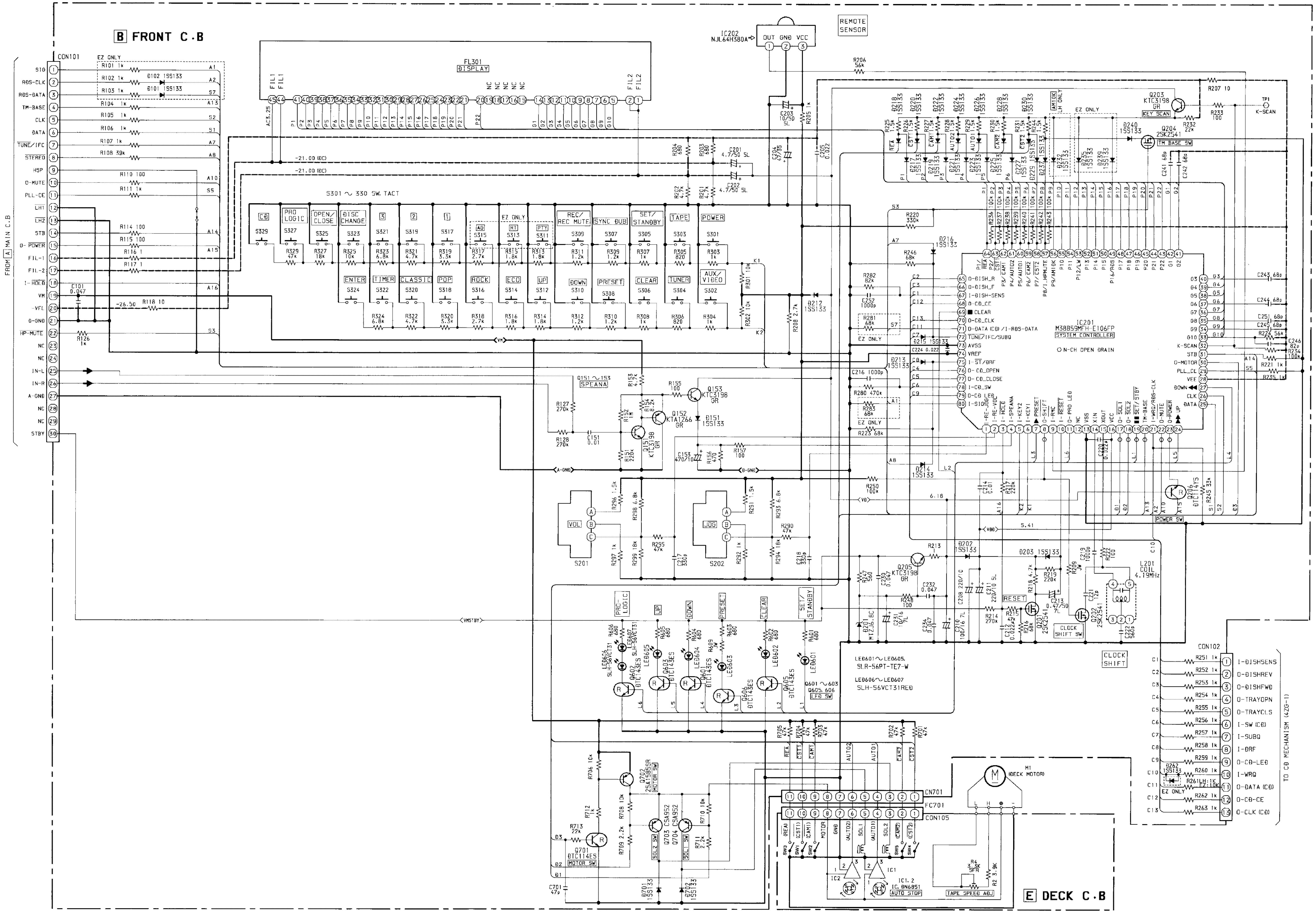
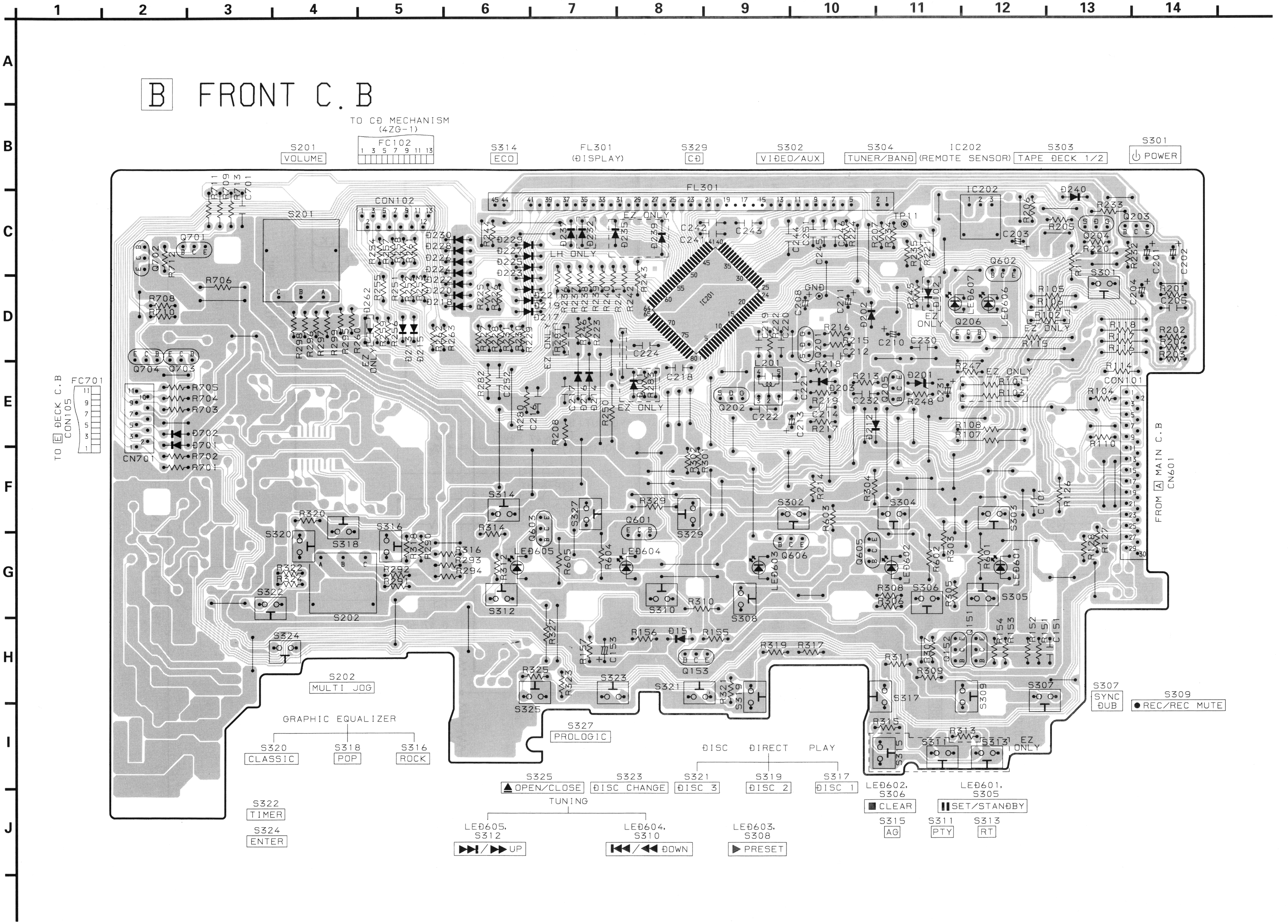
CON351
1 2 3 4 5 6 7 8
CN351
CON301
1 2 3
CN301
TO 4ZG-1 Z3RDSHM
FC602
CN602
TO D TUNER C.B
CN701
EZ:16PIN
LH:13PIN
A MAIN C.B
CN604
CN601
IC601
IC801
IC303
TO B FRONT C.B
CON101
J601
J604
VIDEO/AUX
TO C PT C.B CN001
CNA001
MARK
WH001
J204
SPEAKERS
CENTER SPEAKER
SUBWOOFER SPEAKER
R
L
SURROUND SPEAKER
EZ ONLY
LH ONLY
J203
SPEAKERS FRONT
+
−
J201
PHONES
CLP301
SFR351
SFR352
TP9 (RCH)
TP8 (LCH)
GND

SCHEMATIC DIAGRAM – 1 (MAIN 1 / 3 : AMP)


A MAIN C.B (1/3)
AMP SECTION
TO/FROM A MAIN C.B (2/3) (PROLOGIC DECODER SECTION)
TO/FROM A MAIN C.B (3/3) (DECK SECTION)
TO B FRONT C.B CON101
CN601
TO CD MECHANISM 4Z3-1
CN602
TO C PT C.B CN001
WH001
TO D TUNER C.B CN701
CN604
CN605
EZ ONLY
LH ONLY
IC601 M62445 AFP
FUNCTION/V-F/ VOL/T-BASS/GEQ
J604
VIDEO/AUX
TP2 FUNC.OUT
Q601 KTA1266 GR
Q604 DTA124EKA
Q223 RT1P 441C
MUTE SW
HP-MUTE
D-MUTE
Q003, Q005~007 CONST. VOL REG
Q003 2SB1370 E
Q005 KTC3198
Q009 2SC4115 BC
VCC SW
POWER SW
-VFL REG
Q001, Q002 KTA1266 GR X2
D001 GBU8BL
F1
F2
Q065, 066 AC DET
Q064, 065 DC DET
HOLD SW
Q101, 102, 127 MUTE SW
Q103~110, Q119~122, Q203~210, Q215~218 POWER AMP
Q123, 124, Q219, 220 OVERLOAD DET
Q061 RT1P 141C
Q062 A1235
THERMAL PROTECTOR
Q081 RT1P 141C
Q082 A1235
Q215 2SD2025
Q216 2SD1933
Q119 2SD1933
Q120 2SD1933
Q121 2SB1342
Q122 2SB1342
TH101 100K
TH102 100K
TH201 100K
TH202 100K
J204 SPEAKER
CENTER SPEAKER
SUBWOOFER
SURR SPEAKER
(L)
(R)
J201 PHONES
J203
FRONT SPEAKER
CLP301
SIGNAL:
PB/MIC
REC

SCHEMATIC DIAGRAM – 2 (FRONT)


B FRONT C.B
CON101
FROM A MAIN C.B
SIG
RDS-CLK
RDS-DATA
TM-BASE
CLK
DATA
TUNE/IFC
STEREO
HSP
D-MUTE
PLL-CE
LH1
LH2
STB
D-POWER
FIL-1
FIL-2
I-HOLD
VM
-VFL
D-GND
HP-MUTE
NC
IN-L
IN-R
A-GND
STBY
EZ ONLY
FL301
DISPLAY
IC202
NJL64H380A
OUT GND VCC
REMOTE
SENSOR
S301 ∼ 330 SW, TACT
CD
PRO LOGIC
OPEN/CLOSE
DISC CHANGE
REC/REC MUTE
SYNC DUB
SET/STANDBY
TAPE
POWER
ENTER
TIMER
CLASSIC
POP
ROCK
ECO
UP
DOWN
PRESET
CLEAR
TUNER
AUX/VIDEO
IC201
M38B59MFH-E106FP
SYSTEM CONTROLLER
○ N-CH OPEN DRAIN
Q203
KTC3198
KEY SCAN
Q204
2SK2541
TM BASE SW
TP1
K-SCAN
Q151 ∼ 153
SPEANA
VOL
JOG
S201
S202
Q205
KTC3198
RESET
Q201
2SK2541
Q202
2SK2541
CLOCK SHIFT SW
CLOCK SHIFT
L201
COIL
4.19MHz
Q206
DTC114YS
POWER SW
LE0601 ∼ LE0605,
SLR-56PT-TE7-W
LE0606 ∼ LE0607
SLH-56VCT31RED
Q601 ∼ 603
Q605, 606
LED SW
CON102
I-DISHSENS
O-DISHREV
O-DISHFWD
O-TRAYOPN
O-TRAYCLS
I-SW (CD)
I-SUBQ
I-DRF
O-CD-LED
I-WRQ
O-DATA (CD)
O-CD-CE
O-CLK (CD)
TO CD MECHANISM (4ZG-1)
Q701
DTC114ES
MOTOR SW
Q702
2SA1585R
MOTOR SW
Q703 C5A952
Q704 C5A952
SOL2 SW
SOL1 SW
CN701
FC701
CON105
M1
DECK MOTOR
IC1, 2
IC DN6851
AUTO STOP
TAPE SPEED ADJ
E DECK C.B


1
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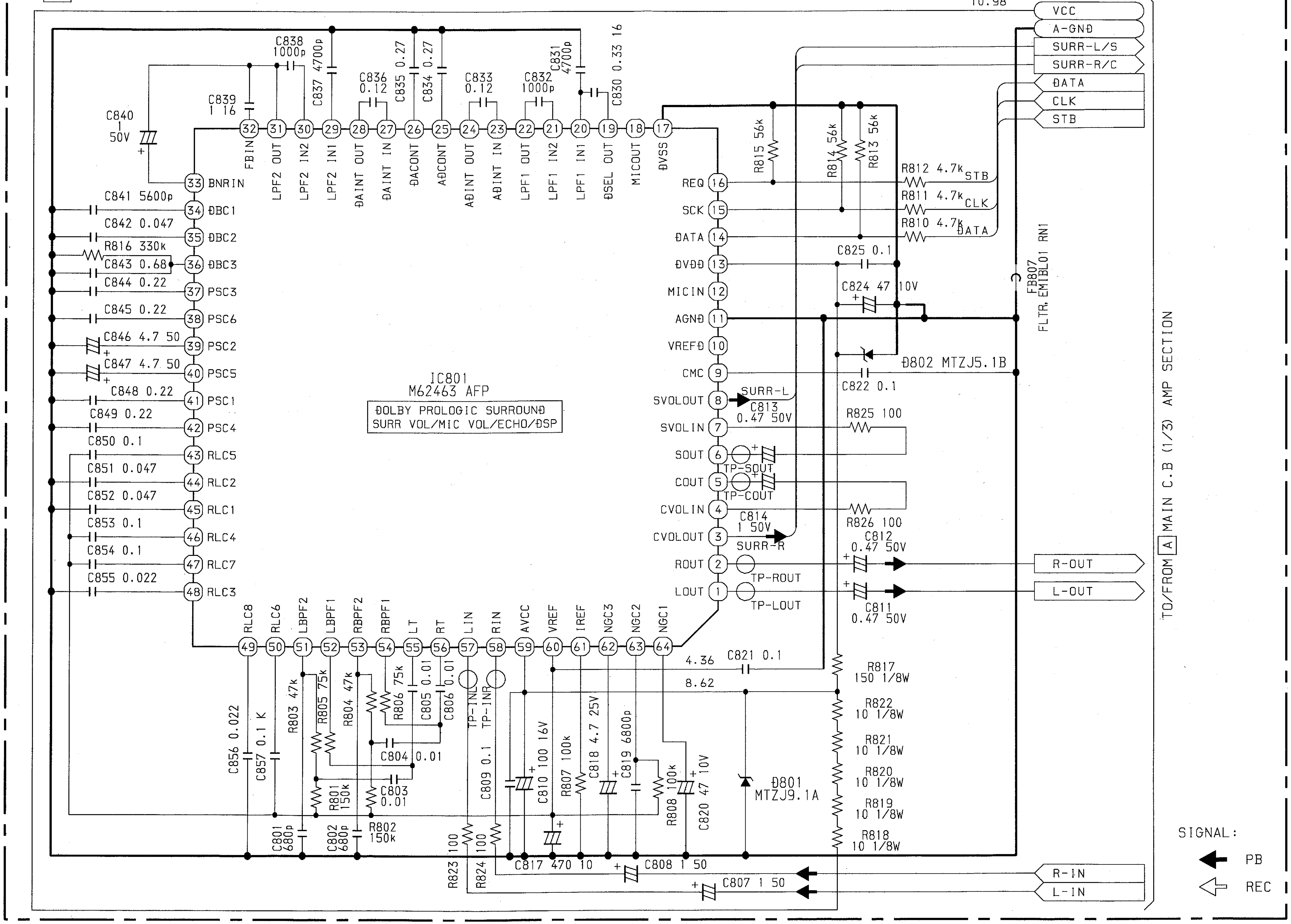
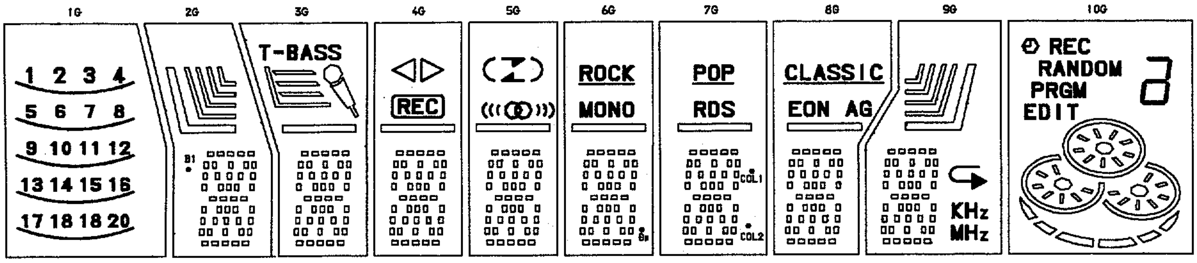
11
12
13
14
A
B
C
D
E
F
G
H
I
J
B FRONT C.B
TO CD MECHANISM (4ZG-1)
FC102
S201 VOLUME
S314 ECO
FL301 (DISPLAY)
S329 CD
S302 VIDEO/AUX
S304 TUNER/BAND
IC202 (REMOTE SENSOR)
S303 TAPE DECK 1/2
S301 ⏻ POWER
CON102
FL301
IC202
IC201
EZ ONLY
LH ONLY
TP11
GND
L201
Q701
Q702
Q703
Q704
Q201
Q202
Q203
Q204
Q205
Q206
Q601
Q602
Q603
Q605
Q606
Q151
Q152
Q153
FC701
CN701
CON105
TO E DECK C.B
CON101
FROM A MAIN C.B CN601
LED601
LED602
LED603
LED604
LED605
LED606
LED607
S202 MULTI JOG
GRAPHIC EQUALIZER
S320 CLASSIC
S318 POP
S316 ROCK
S327 PROLOGIC
S322 TIMER
S324 ENTER
S325 ▲ OPEN/CLOSE
S323 DISC CHANGE
TUNING
LED605, S312 ▶▶I / ▶▶ UP
LED604, S310 I◀◀ / ◀◀ DOWN
DISC DIRECT PLAY
S321 DISC 3
S319 DISC 2
S317 DISC 1
LED603, S308 ▶ PRESET
LED602, S306 ■ CLEAR
LED601, S305 ❚❚ SET/STANDBY
S315 AG
S311 PTY
S313 RT
S307 SYNC DUB
S309 ● REC/REC MUTE

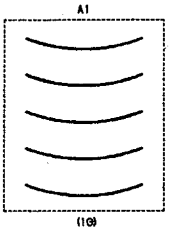
A MAIN C.B (2/3) (PROLOGIC DECODER SECTION)

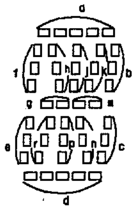

10.98
VCC
A-GND
SURR-L/S
SURR-R/C
DATA
CLK
STB
C838 1000p
C837 4700p
C836 0.12
C835 0.27
C834 0.27
C833 0.12
C832 1000p
C831 4700p
C830 0.33 16
C839 1 16
C840 1 50V
FBIN
LPF2 OUT
LPF2 IN2
LPF2 IN1
DAINT OUT
DAINT IN
DACONT
ADCONT
ADINT OUT
ADINT IN
LPF1 OUT
LPF1 IN2
LPF1 IN1
DSEL OUT
MICOUT
DVSS
BNRIN
DBC1
DBC2
DBC3
PSC3
PSC6
PSC2
PSC5
PSC1
PSC4
RLC5
RLC2
RLC1
RLC4
RLC7
RLC3
C841 5600p
C842 0.047
R816 330k
C843 0.68
C844 0.22
C845 0.22
C846 4.7 50
C847 4.7 50
C848 0.22
C849 0.22
C850 0.1
C851 0.047
C852 0.047
C853 0.1
C854 0.1
C855 0.022
IC801
M62463 AFP
DOLBY PROLOGIC SURROUND
SURR VOL/MIC VOL/ECHO/DSP
REQ
SCK
DATA
DVDD
MICIN
AGND
VREFD
CMC
SVOLOUT
SVOLIN
SOUT
COUT
CVOLIN
CVOLOUT
ROUT
LOUT
R815 56k
R814 56k
R813 56k
R812 4.7k STB
R811 4.7k CLK
R810 4.7k DATA
C825 0.1
C824 47 10V
FB807 FLTR, EMIBL01 RN1
D802 MTZJ5.1B
C822 0.1
SURR-L
C813 0.47 50V
R825 100
TP-SOUT
TP-COUT
R826 100
C814 1 50V
SURR-R
C812 0.47 50V
TP-ROUT
TP-LOUT
C811 0.47 50V
R-OUT
L-OUT
TO/FROM A MAIN C.B (1/3) AMP SECTION
RLC8
RLC6
LBPF2
LBPF1
RBPF2
RBPF1
LT
RT
LIN
RIN
AVCC
VREF
IREF
NGC3
NGC2
NGC1
4.36
C821 0.1
8.62
C856 0.022
C857 0.1 K
R803 47k
R805 75k
R804 47k
R806 75k
C805 0.01
C806 0.01
C804 0.01
R801 150k
C803 0.01
C801 680p
C802 680p
R802 150k
TP-INL
TP-INR
C809 0.1
C810 100 16V
R807 100k
C818 4.7 25V
C819 6800p
R808 100k
C820 47 10V
D801 MTZJ9.1A
R817 150 1/8W
R822 10 1/8W
R821 10 1/8W
R820 10 1/8W
R819 10 1/8W
R818 10 1/8W
R823 100
R824 100
C817 470 10
C808 1 50
C807 1 50
R-IN
L-IN
SIGNAL:
PB
REC

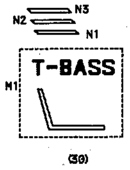
FL (SVA – 10MS12) GRID ASSIGNMENT AND ANODE CONNECTION

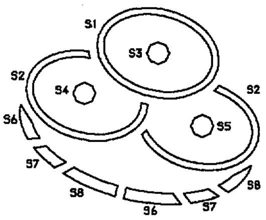
GRID ASSIGNMENT

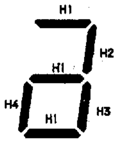

1G
2G
3G
4G
5G
6G
7G
8G
9G
10G
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 18 20
B1
T-BASS
REC
ROCK
MONO
POP
RDS
COL1
COL2
CLASSIC
EON AG
KHz
MHz
REC
RANDOM
PRGM
EDIT

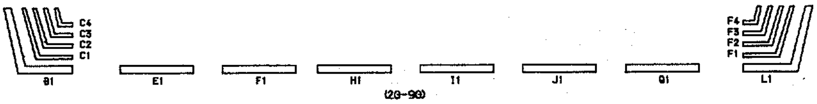


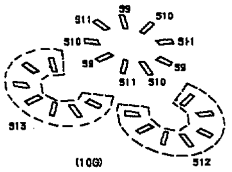

a
b
c
d
e
f
g
h
j
k
m
n
p
r


N3
N2
N1
M1
T-BASS
(3G)


S1
S2
S3
S4
S5
S6
S7
S8



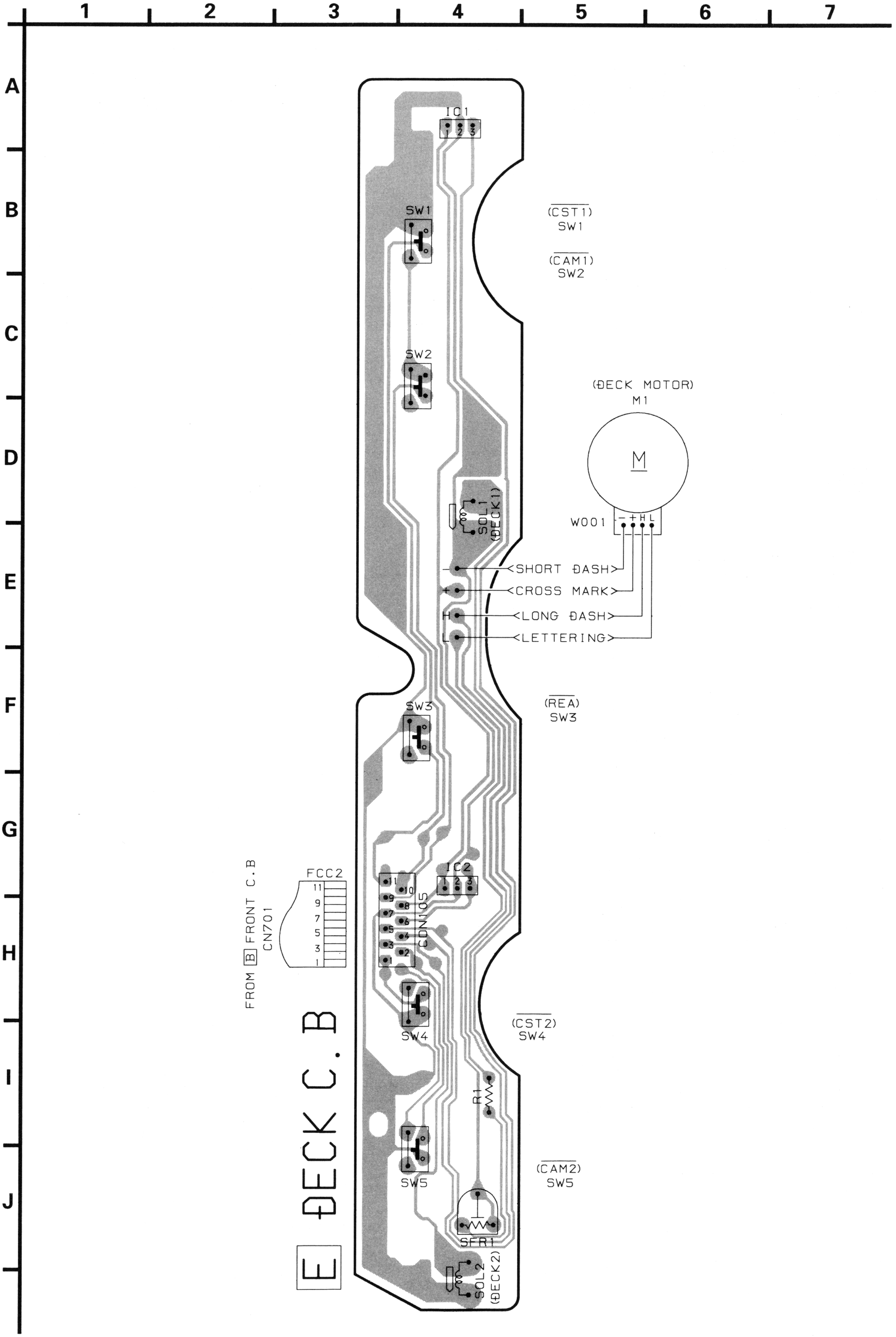

C4
C3
C2
C1
B1
E1
F1
H1
I1
J1
Q1
F4
F3
F2
F1
L1
(2G~9G)


S9
S10
S11
S12
S13
(10G)

ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	**20**	d	d	d	d	d	d	d	d	S1
P2	**19**	n	n	n	n	n	n	n	n	S9
P3	**18**	p	p	p	p	p	p	p	p	S10
P4	**17**	r	r	r	r	r	r	r	r	S11
P5	**16**	e	e	e	e	e	e	e	e	S3
P6	**15**	c	c	c	c	c	c	c	c	S2
P7	**14**	g	g	g	g	g	g	g	g	S13
P8	**13**	m	m	m	m	m	m	m	m	S4
P9	**12**	f	f	f	f	f	f	f	f	S12
P10	**11**	b	b	b	b	b	b	b	b	S5
P11	**10**	k	k	k	k	k	k	k	k	S6
P12	**9**	j	j	j	j	j	j	j	j	S7
P13	**8**	h	h	h	h	h	h	h	h	S8
P14	**7**	a	a	a	a	a	a	a	a	**EDIT**
P15	**6**	Đ1	E1	F1	H1	Đp	COL2	Q1	**MHz**	**PRGM**
P16	**5**	C1	M1	**(REC)**	(((⊕)))	I1	COL1	**EON**	**KHz**	**RANDOM**
P17	**4**	C2	N1	◁	(	**MONO**	J1	**AG**	⊂▷	**REC**
P18	**3**	C3	N2	▷	⇌	——	**RDS**	——	L1	◷
P19	**2**	C4	N3		)	**ROCK**	——	**CLASSIC**	F1	H1
P20	**1**	B1	🎤				**POP**		F2	H2
P21	A1								F3	H3
P22									F4	H4

WIRING – 3 (DECK)


1
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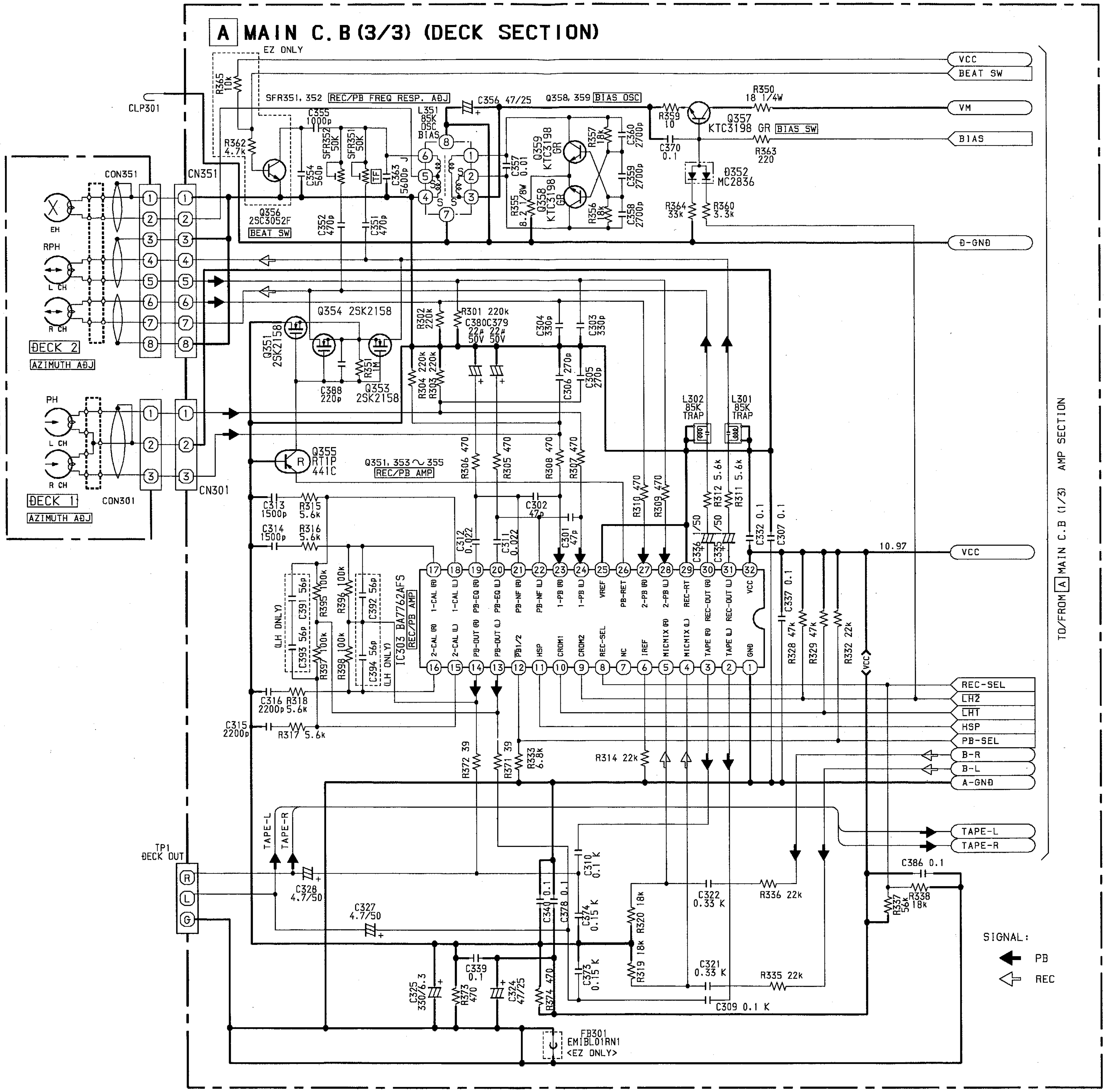
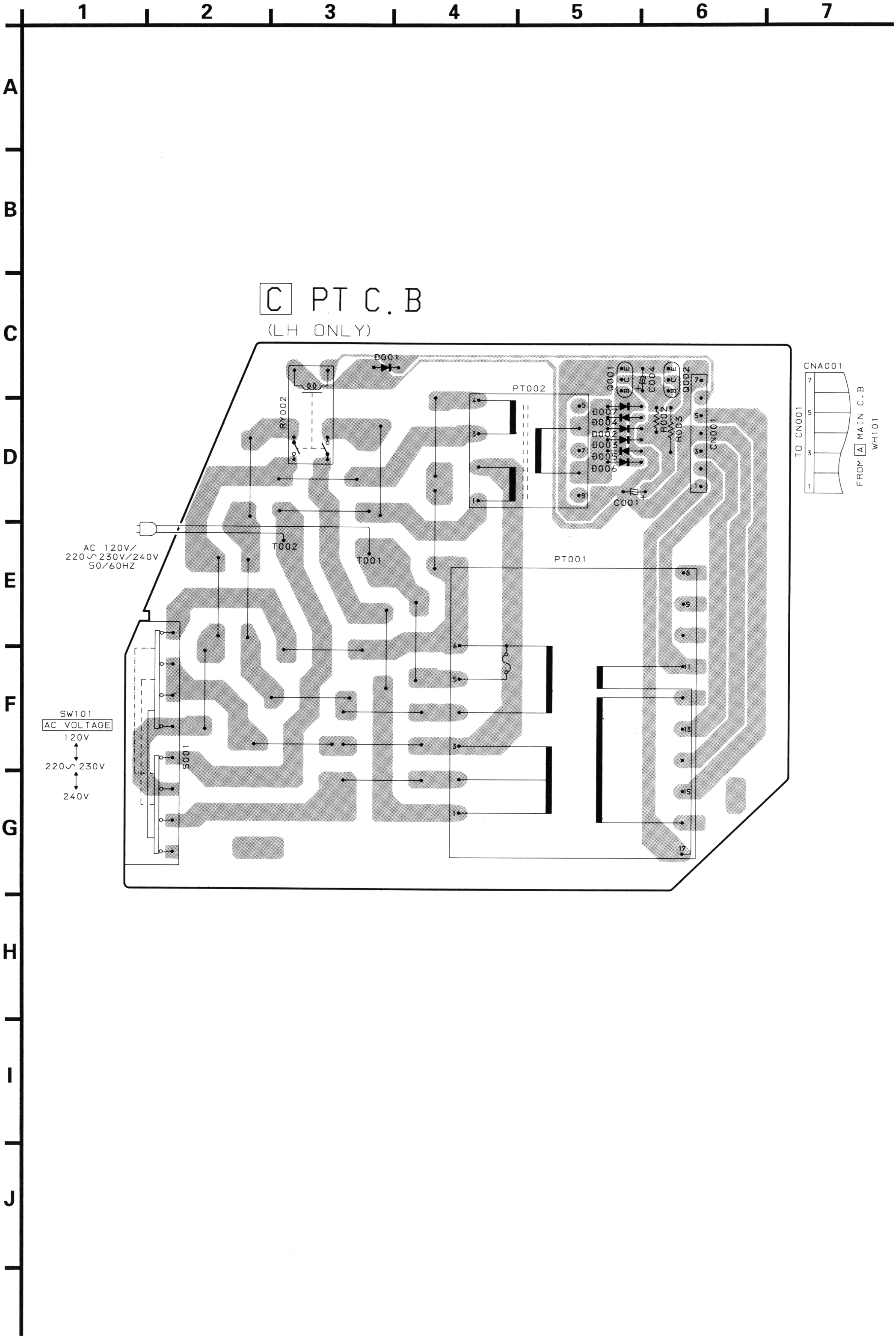
5
6
7
A
B
C
D
E
F
G
H
I
J
IC1
1 2 3
SW1
(CST1)
SW1
(CAM1)
SW2
SW2
(DECK MOTOR)
M1
M
W001
– + H L
SOL1
(DECK1)
<SHORT DASH>
<CROSS MARK>
<LONG DASH>
<LETTERING>
–
+
H
L
SW3
(REA)
SW3
IC2
1 2 3
CON105
11 10 9 8 7 6 5 4 3 2 1
FCC2
11
9
7
5
3
1
FROM B FRONT C.B
CN701
DECK C.B
E
SW4
(CST2)
SW4
R1
SW5
(CAM2)
SW5
SFR1
SOL2
(DECK2)

SCHEMATIC DIAGRAM – 4 (MAIN 3 / 3 : DECK)



A MAIN C.B (3/3) (DECK SECTION)
EZ ONLY
CLP301
R365 10k
SFR351, 352 REC/PB FREQ RESP. ADJ
C355 1000p
R362 4.7k
C354 560p
SFR352 50K
SFR351 50K
TF
C363 5600p J
L351 85K OSC BIAS
C356 47/25
Q358, 359 BIAS OSC
C357 0.01
Q359 KTC3198 GR
Q358 KTC3198 GR
R355 8.2 1/8W
R357 18k
R356 18k
C360 2700p
C359 2700p
C358 2700p
R359 10
R350 18 1/4W
Q357 KTC3198 GR BIAS SW
C370 0.1
R363 220
D352 MC2836
R364 33k
R360 3.3k
Q356 2SC3052F BEAT SW
C352 470p
C351 470p
CON351
CN351
EH
RPH
L CH
R CH
DECK 2
AZIMUTH ADJ
TAPE DECK MECHANISM (6ZM-3 PR1NM)
PH
DECK 1
CON301
CN301
Q354 2SK2158
Q351 2SK2158
R351 1M
C388 220p
Q353 2SK2158
Q355 RT1P 441C
Q351, 353 ~ 355 REC/PB AMP
R302 220k
R301 220k
C380 C379 22μ 22μ 50V 50V
C304 330p
C303 330p
R304 220k
R303 220k
C306 270p
C305 270p
L302 85K TRAP
L301 85K TRAP
R306 470
R305 470
R308 470
R307 470
R310 470
R309 470
R312 5.6k
R311 5.6k
C313 1500p
R315 5.6k
C314 1500p
R316 5.6k
C302 47p
C312 0.022
C311 0.022
C301 47p
C336 1/50
C335 1/50
C332 0.1
C307 0.1
10.97
C391 56p
R395 100k
R396 100k
C392 56p
C393 56p
R397 100k
R398 100k
C394 56p
(LH ONLY)
IC303 BA7762AFS REC/PB AMP
1-CAL (R)
1-CAL (L)
PB-EQ (R)
PB-EQ (L)
PB-NF (R)
PB-NF (L)
1-PB (R)
1-PB (L)
VREF
PB-RET
2-PB (R)
2-PB (L)
REC-RT
REC-OUT (R)
REC-OUT (L)
VCC
2-CAL (R)
2-CAL (L)
PB-OUT (R)
PB-OUT (L)
PB1/2
HSP
CROM1
CROM2
REC-SEL
NC
IREF
MICMIX (R)
MICMIX (L)
TAPE EQ (R)
TAPE EQ (L)
GND
C337 0.1
R328 47k
R329 47k
R332 22k
C316 R318 2200p 5.6k
C315 2200p
R317 5.6k
R372 39
R371 39
R333 6.8k
R314 22k
TAPE-L
TAPE-R
TP1 DECK OUT
C328 4.7/50
C327 4.7/50
C310 0.1 K
C340 0.1
C378 0.1
C374 0.15 K
C373 0.15 K
R320 18k
R319 18k
C322 0.33 K
R336 22k
C321 0.33 K
R335 22k
C309 0.1 K
C325 330/6.3
C339 0.1
R373 470
C324 47/25
R374 470
FB301 EMIBL01RN1 <EZ ONLY>
C386 0.1
R337 56k
R338 18k
VCC
BEAT SW
VM
BIAS
D-GND
REC-SEL
CH2
CH1
HSP
PB-SEL
B-R
B-L
A-GND
TAPE-L
TAPE-R
TO/FROM A MAIN C.B (1/3) AMP SECTION
SIGNAL:
PB
REC

WIRING – 4 (PT : LH)


1
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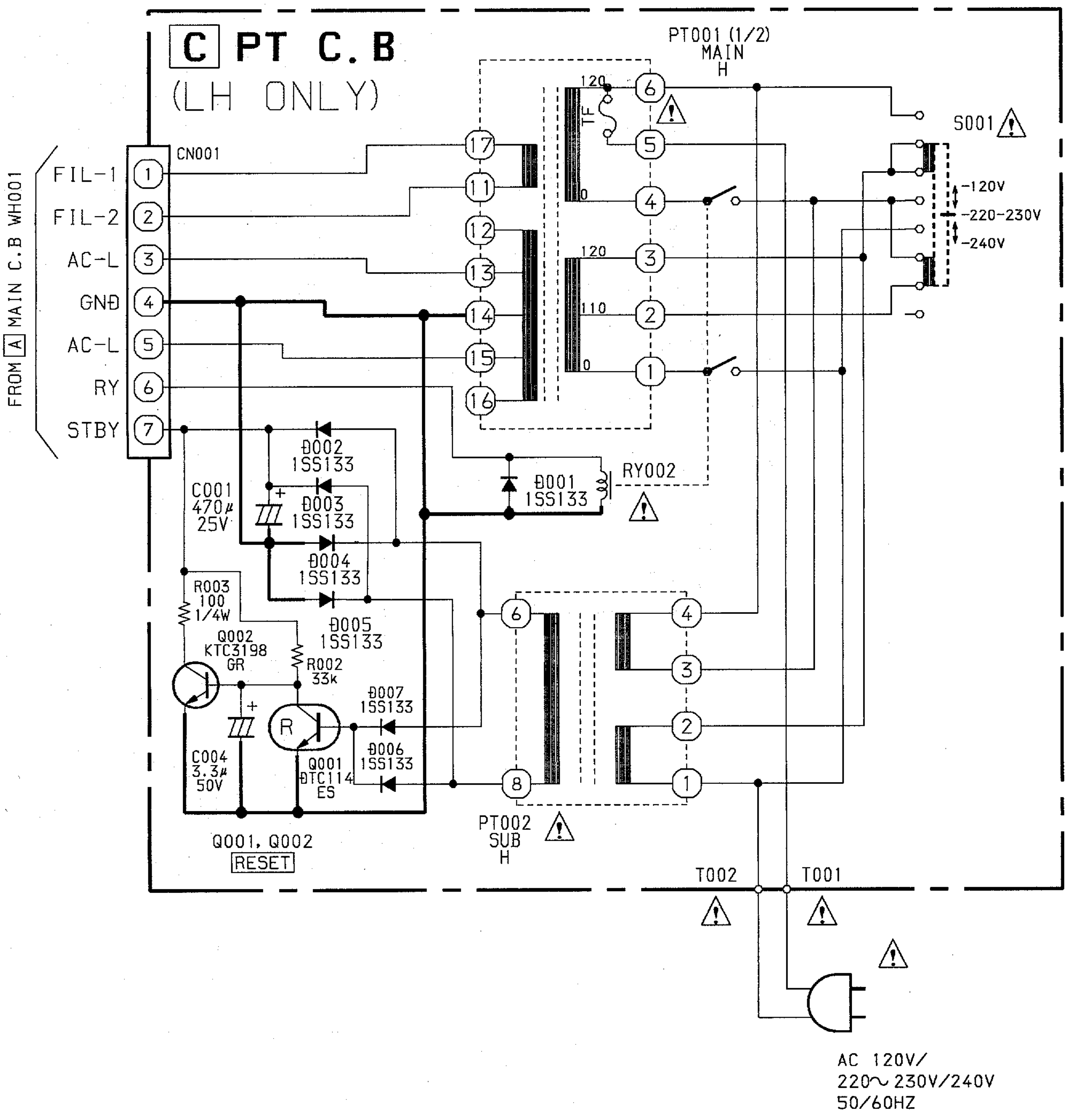
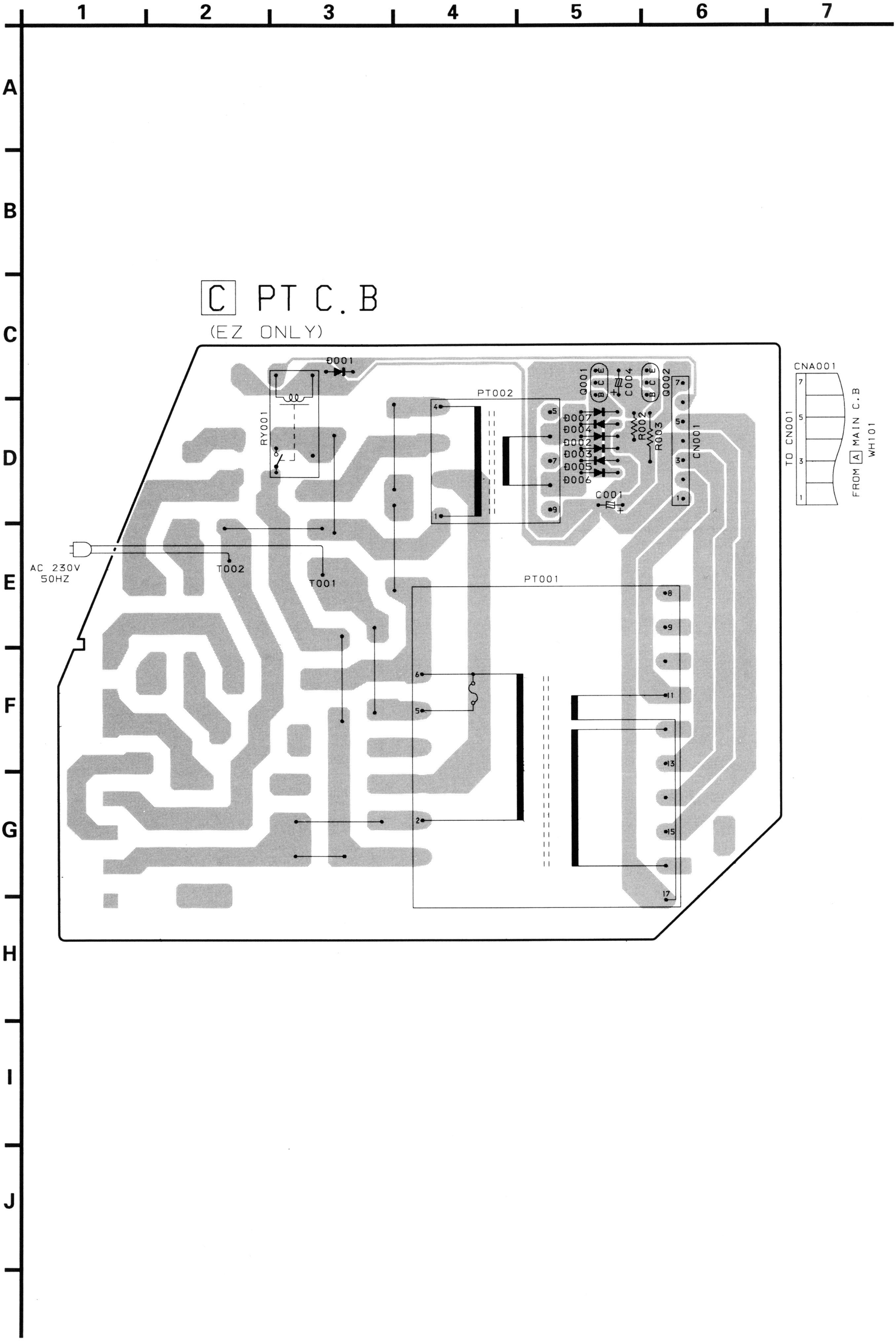
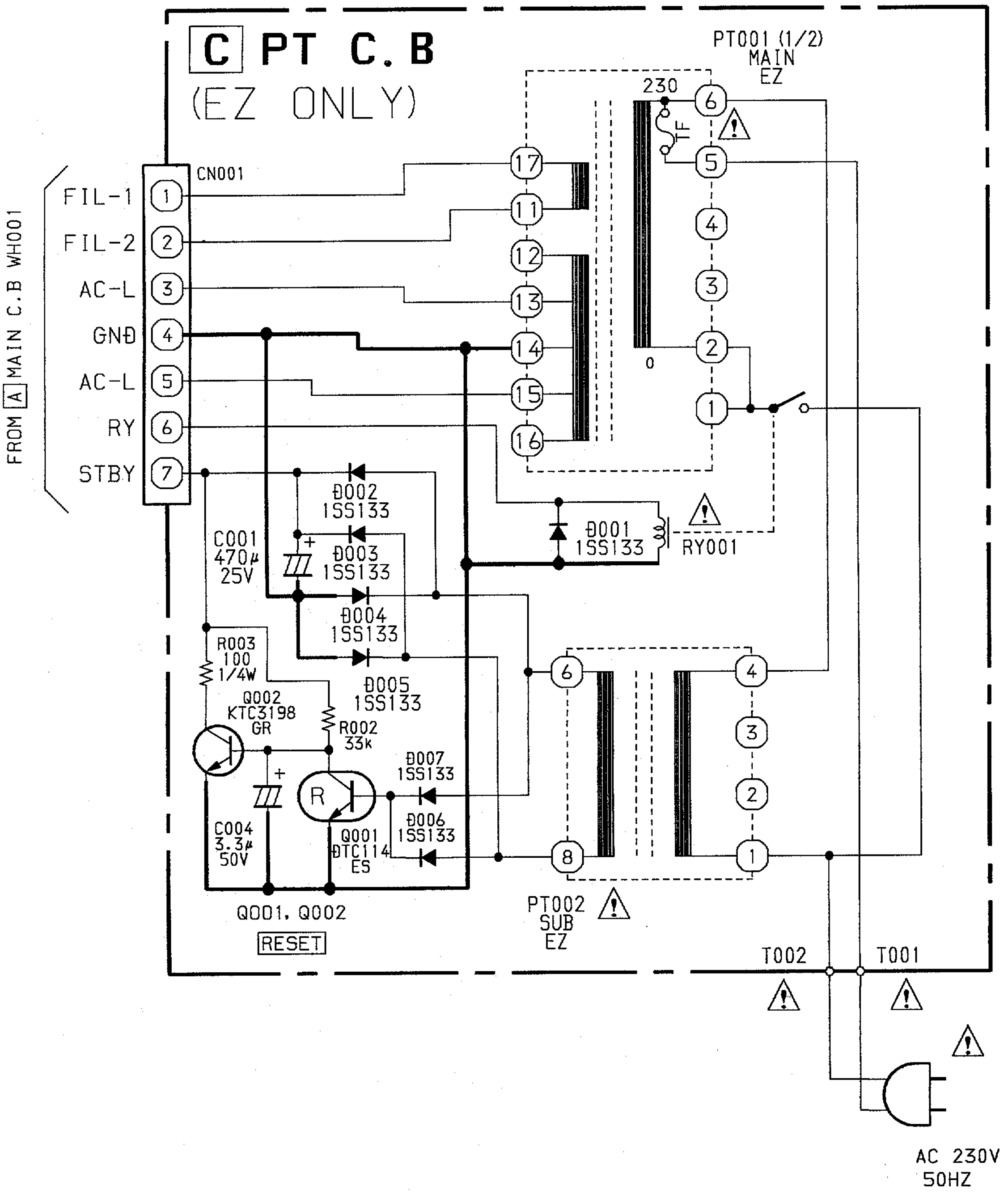
6
7
A
B
C
D
E
F
G
H
I
J
C PT C.B
(LH ONLY)
D001
RY002
PT002
Q001
B C E
C004
Q002
D007
D004
D002
D003
D005
D006
R002
R003
CN001
C001
T002
T001
PT001
AC 120V/
220∽230V/240V
50/60HZ
SW101
AC VOLTAGE
120V
220∽230V
240V
S001
CNA001
TO CN001
FROM A MAIN C.B
WH101

SCHEMATIC DIAGRAM – 5 (PT : LH)

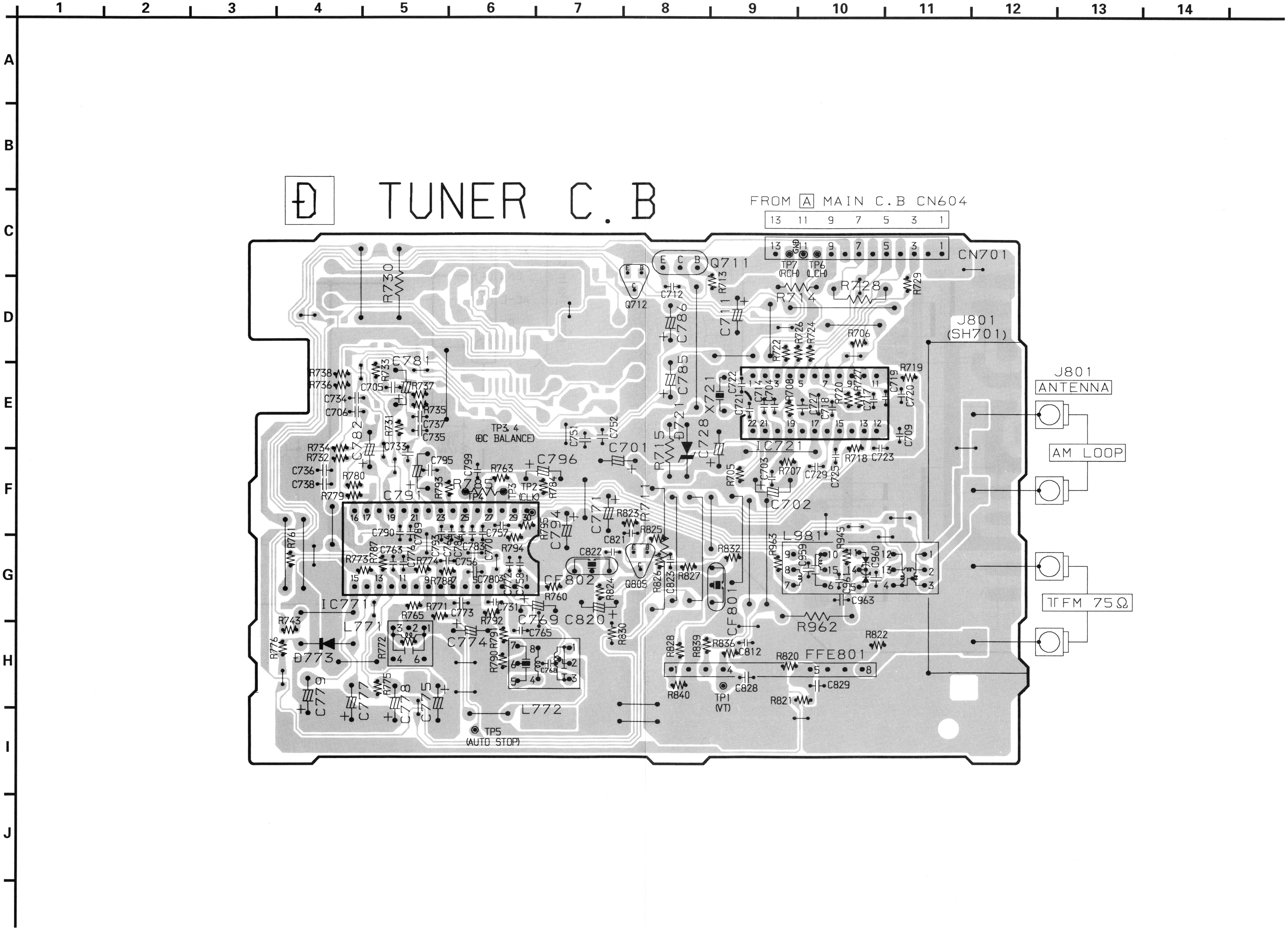

C PT C.B
(LH ONLY)
FROM A MAIN C.B WH001
FIL-1
FIL-2
AC-L
GND
AC-L
RY
STBY
CN001
1
2
3
4
5
6
7
PT001 (1/2)
MAIN
H
120
TF
0
120
110
0
17
11
12
13
14
15
16
6
5
4
3
2
1
S001
-120V
-220-230V
-240V
D002
1SS133
D003
1SS133
D004
1SS133
D005
1SS133
D001
1SS133
RY002
C001
470μ
25V
R003
100
1/4W
Q002
KTC3198
GR
R002
33k
D007
1SS133
D006
1SS133
C004
3.3μ
50V
R
Q001
DTC114
ES
Q001, Q002
RESET
PT002
SUB
H
6
8
4
3
2
1
T002
T001
AC 120V/
220~230V/240V
50/60HZ

WIRING – 5 (PT : EZ)

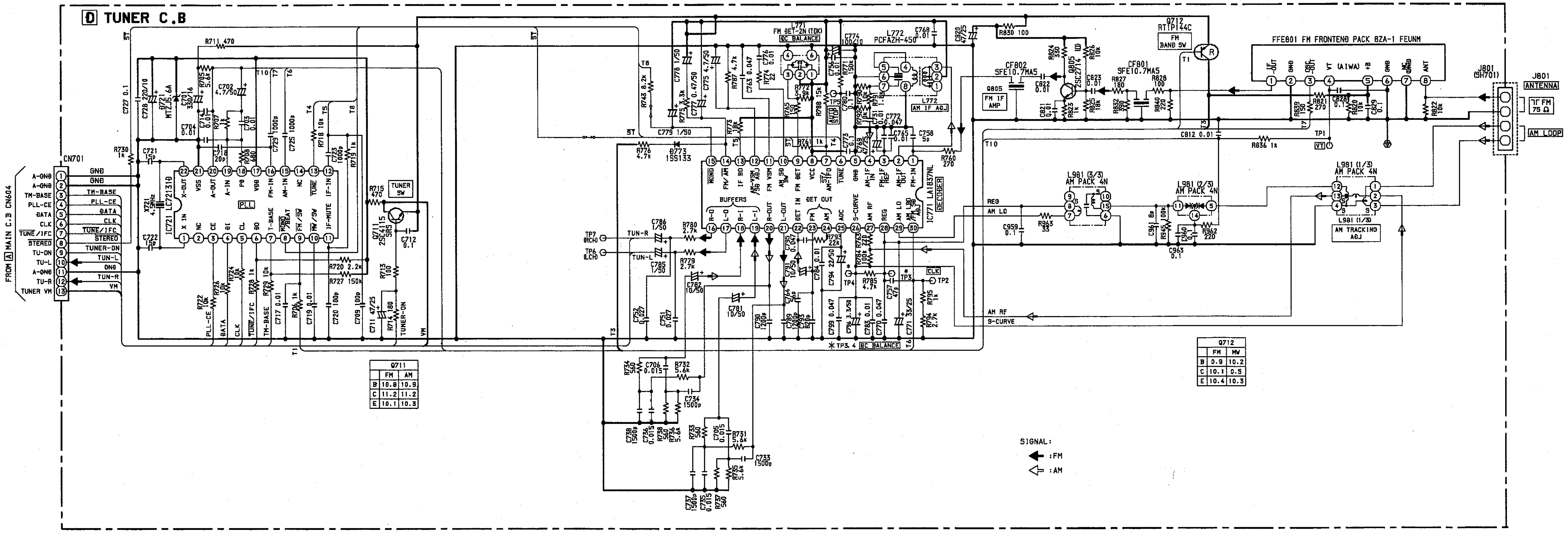

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
C PT C.B
(EZ ONLY)
D001
RY001
PT002
Q001
E
C
B
C004
Q002
D007
D004
D002
D003
D005
D006
R002
R003
CN001
C001
CNA001
TO CN001
FROM A MAIN C.B
WH101
AC 230V
50HZ
T002
T001
PT001
1
2
3
4
5
6
7
8
9
11
13
15
17


C PT C.B
(EZ ONLY)
FROM A MAIN C.B WH001
CN001
FIL-1
FIL-2
AC-L
GND
AC-L
RY
STBY
1
2
3
4
5
6
7
PT001 (1/2)
MAIN
EZ
230
0
TF
17
11
12
13
14
15
16
6
5
4
3
2
1
D001
1SS133
RY001
D002
1SS133
C001
470μ
25V
D003
1SS133
D004
1SS133
D005
1SS133
R003
100
1/4W
Q002
KTC3198
GR
R002
33k
D007
1SS133
C004
3.3μ
50V
Q001
DTC114
ES
D006
1SS133
Q001, Q002
RESET
PT002
SUB
EZ
8
T002
T001
AC 230V
50HZ

WIRING – 6 (TUNER : LH)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
D TUNER C.B
FROM A MAIN C.B CN604
13 11 9 7 5 3 1
CN701
TP7 (RCH)
TP6 (LCH)
GND
Q711
E C B
Q712
R713
R714
R728
R729
C712
C711
C786
C785
R730
R706
R722
R726
R724
J801 (SH701)
J801 ANTENNA
AM LOOP
TFM 75Ω
R719
C719
C720
C709
IC721
X721
C722
C721
C714
C704
R708
C727
C718
R720
R727
C717
R718
C723
C725
C729
R707
C703
C702
R705
D721
C728
R715
C701
C752
C751
TP3, 4 (DC BALANCE)
C796
R763
R784
TP2 (CLK)
TP3
TP4
R785
R793
C799
C795
C781
R738
R736
R733
C705
R737
C734
C706
R735
C737
C735
R731
C782
C733
R734
R732
C736
C738
R780
R779
C791
C790
C789
C793
C764
C783
C757
R795
R794
C794
C770
C763
R787
R773
C776
R774
C756
R788
C780
C772
C758
R761
IC771
R743
R776
D773
L771
R772
R771
R765
C773
C731
R792
C774
R791
R790
C765
C769
C768
C820
R760
C771
R823
R825
C821
C822
Q805
CF802
R824
R826
C823
R827
R832
R830
CF801
L981
R963
C959
R945
C960
C961
C963
R962
R822
R828
R839
R836
C812
R820
FFE801
C828
C829
R840
TP1 (VT)
R821
C779
C777
R775
C778
C775
L772
TP5 (AUTO STOP)

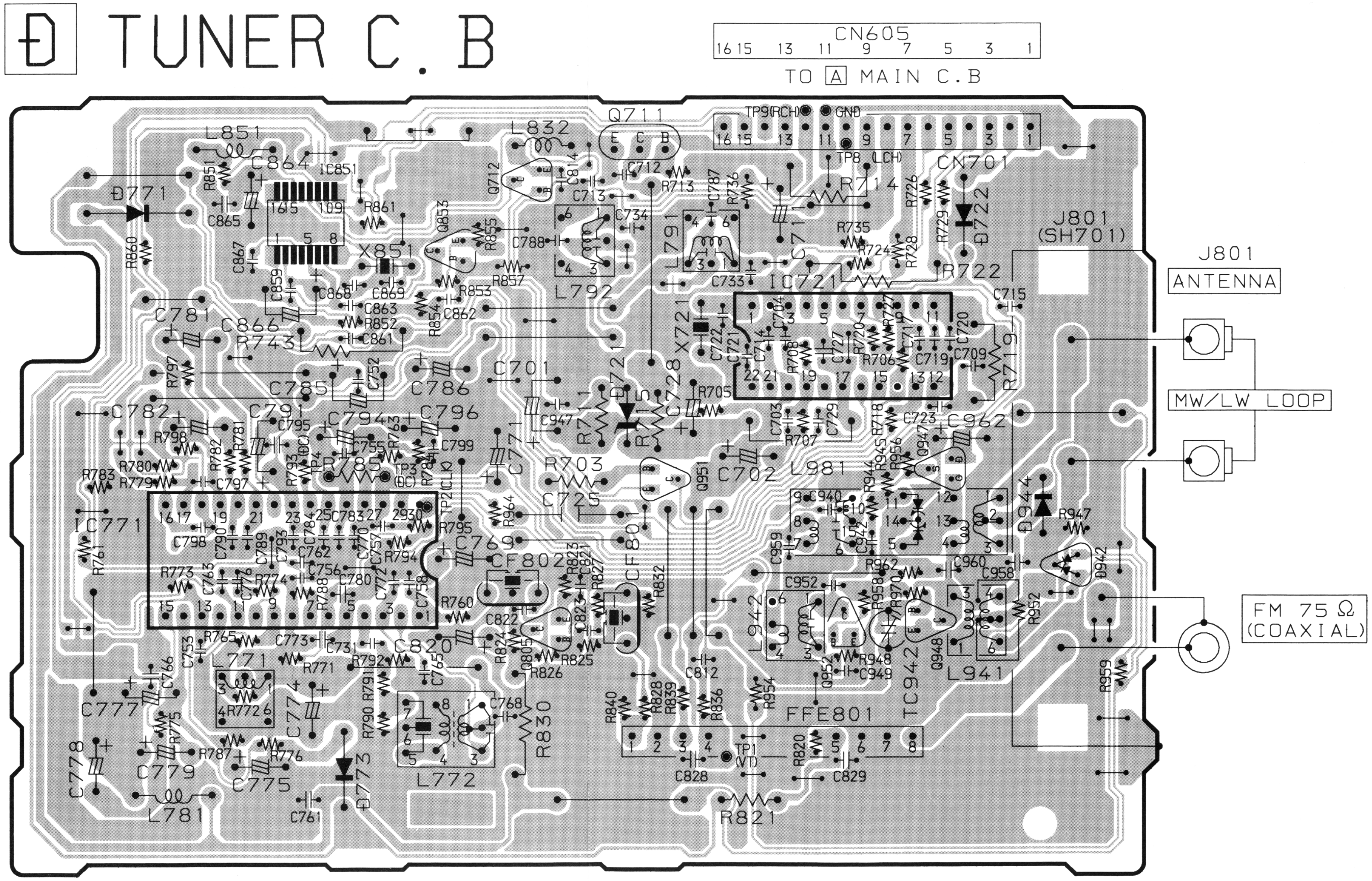
SCHEMATIC DIAGRAM – 7 (TUNER : LH)


D TUNER C.B
FROM A MAIN C.B CN604
CN701
A-GND
TM-BASE
PLL-CE
DATA
CLK
TUNE/IFC
STEREO
TU-ON
TU-L
TU-R
TUNER VM
TUNER-ON
IC721 LC72131D
X721 4.5MHz
Q711 2SC4115 SR
TUNER SW
IC771 LA1837NL
DECODER
BUFFERS
DET OUT
L771 FM DET-2N (TDK)
DC BALANCE
L772 PCFAZH-450
AM IF ADJ
AUTO STOP
Q712 RT1P144C
FM BAND SW
Q805 2SC2714 FM IF AMP
CF802 SFE10.7MA5
CF801 SFE10.7MA5
FFE801 FM FRONTEND PACK 8ZA-1 FEUNM
J801 (SH701)
J801 ANTENNA
FM 75 Ω
AM LOOP
L981 (1/3) AM PACK 4N
L981 (2/3) AM PACK 4N
L981 (3/3) AM PACK 4N
AM TRACKING ADJ
REG
AM LO
AM RF
S-CURVE
TP1
TP2
TP3
TP4
TP6 (LCH)
TP7 (RCH)
CLK
✳TP3, 4 DC BALANCE
SIGNAL:
:FM
:AM

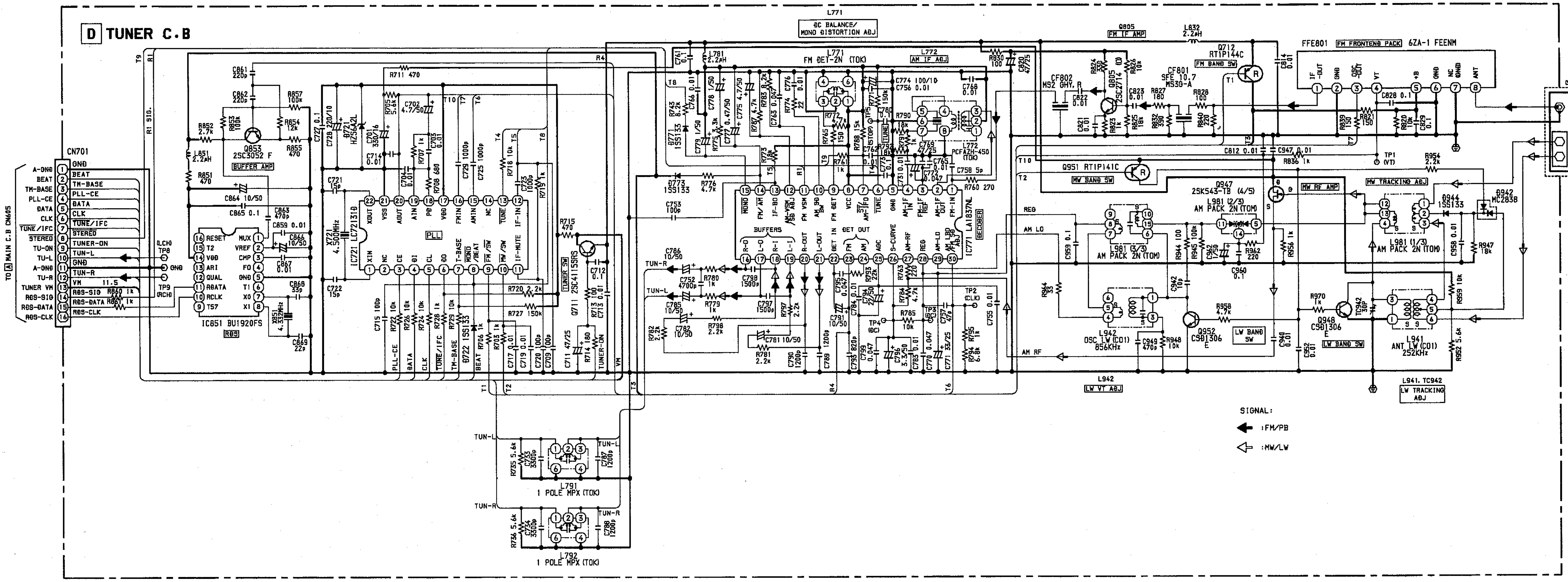
Q711		
	FM	AM
B	10.8	10.9
C	11.2	11.2
E	10.1	10.3

Q712		
	FM	MW
B	0.9	10.2
C	10.1	0.5
E	10.4	10.3

Đ TUNER C. B


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
CN605
16 15 13 11 9 7 5 3 1
TO A MAIN C.B
TP9(RCH) GND
TP8 (LCH)
CN701
J801 (SH701)
J801
ANTENNA
MW/LW LOOP
FM 75 Ω (COAXIAL)
L851
C864
IC851
D771
C865
R851
R861
X851
Q853
R855
C867
C859
C868
C869
R853
R854
C863
R852
C862
C861
R857
L832
Q711
E C B
Q712
C814
C712
R713
C713
C734
C788
L792
L791
C787
R736
R714
C711
R735
R724
R728
R726
R729
D722
R722
C715
C733
IC721
X721
C722
C721
C704
C714
R708
C727
R720
R727
C717
C720
C709
R706
C719
R719
C781
C866
R743
R797
C752
C785
C786
C701
D721
R711
R715
C728
C947
R705
C703
R707
C729
R718
C723
C962
C782
R798
R782
R781
C791
C795
R793
C794
C755
C796
C799
R784
TP3 (DC)
TP2 (CLK)
R785
C771
R703
C725
Q951
C702
L981
R780
R779
R783
C797
IC771
C798
C790
C789
C793
C784
C783
C762
C770
C757
R794
C756
C780
R773
C763
C776
R774
R788
C772
C758
R760
R795
C769
CF802
R823
C821
R827
CF801
R832
R964
C940
R944
R945
R956
Q947
C942
C959
C952
R962
R958
R970
C960
C958
R952
D944
R947
D942
L942
Q952
R948
C949
TC942
Q948
L941
R959
R761
C753
R765
C773
C731
C820
L771
R771
R772
R792
R791
C765
C822
R824
Q805
R826
R825
C812
R840
R828
R839
R836
R954
C777
C766
R775
C774
R790
C768
R830
FFE801
C778
R787
R776
C779
C775
D773
L772
C761
L781
TP1 (VT)
R820
C828
C829
R821

SCHEMATIC DIAGRAM – 8 (TUNER : EZ)


D TUNER C.B
TO A MAIN C.B CN605
CN701
A-GND
BEAT
TM-BASE
PLL-CE
DATA
CLK
TUNE/IFC
STEREO
TUNER-ON
TUN-L
GND
TUN-R
VH
RDS-SIO
RDS-DATA
RDS-CLK
TUNER VH
IC851 BU1920FS
RDS
Q853 2SC5052 F
BUFFER AMP
IC721 LC72131D
PLL
X721 4.500MHz
Q711 2SC4115SRS
TUNER SW
IC771 LA1837NL
DECODER
BUFFERS
DET OUT
L771 FM DET-2N (TOK)
L771 DC BALANCE/ MONO DISTORTION ADJ
L772 AM IF ADJ
L772 PCFAZH-450 (TOK)
CF802 MS2 GHY.R
CF801 SFE 10.7 MS3G-A
Q805 2SC2714 (O)
FM IF AMP
L832 2.2μH
Q712 RT1P144C
FM BAND SW
Q951 RT1P141C
MW BAND SW
Q947 2SK543-TB (4/5)
MW RF AMP
L981 (2/3) AM PACK 2N (TOK)
L981 (3/3) AM PACK 2N (TOK)
L981 (1/3) AM PACK 2N (TOK)
MW TRACKING ADJ
D944 1SS133
D942 MC2838
FFE801 FM FRONTEND PACK 6ZA-1 FEENM
IF-OUT
GND
OSC-OUT
VT
+B
NC (GND)
ANT
CN701
J801 ANTENNA
FM 75Ω (COAXIAL)
MW/LW LOOP
TP1 (VT)
TP2 (CLK)
TP3 (DC)
TP4 (DC)
TP8 (LCH)
TP9 (RCH)
L942 OSC LW (CD1) 856KHz
L942 LW VT ADJ
Q952 C901306 E
LW BAND SW
Q948 C901306 E
L941 ANT LW (CD1) 252KHz
L941, TC942 LW TRACKING ADJ
AM RF
AM LO
REG
L791 1 POLE MPX (TOK)
L792 1 POLE MPX (TOK)
TUN-L
TUN-R
SIGNAL:
:FM/PB
:MW/LW

IC DESCRIPTION

IC, LC72131D

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>XIN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>XOUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Serial data input from CPU (µP M38B59MFH-P101FP) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CL</td><td>I</td><td>Synchronization clock for serial data in (DI) or serial data out (DO).</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Serial data output to CPU (µP M38B59MFH-P101FP).</td></tr>
<tr><td>7</td><td>T-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when MONO / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / $\overline{\text{SW}}$</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$/SW</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>MW</td><td>SW</td><td>FM</td></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IF-IN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>15</td><td>AM-IN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>FM-IN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>A-IN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>A-OUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>

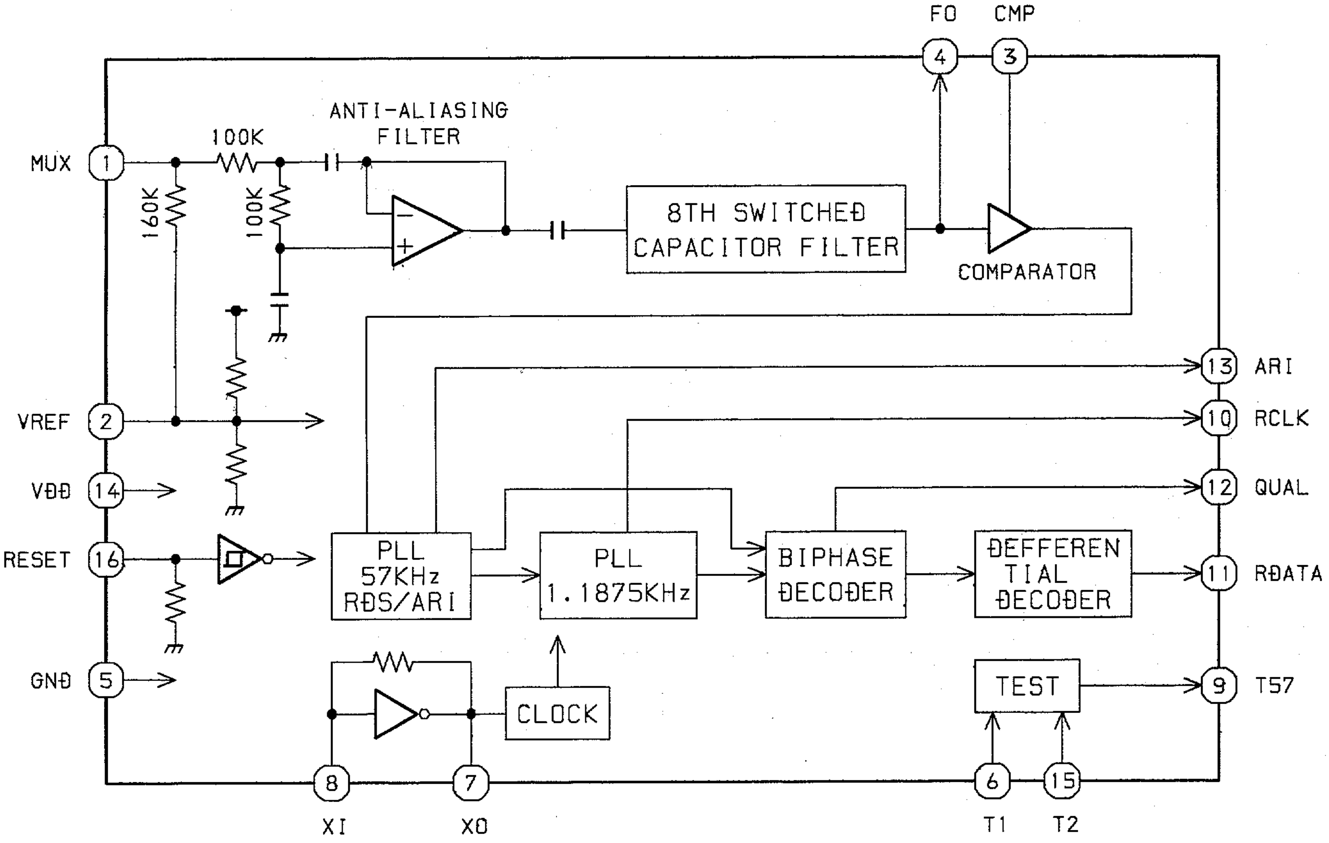
IC, M38B59MFH-E106FP

Pin No.	Pin Name	I/O	Description
1	I-RE-JOG	I	MULTI JOG Rotary encoder input A/B.
2	I-RE-VOL	I	Main volume rotary encoder input A/B.
3	I-HOLD	I	Power failure detection, "L" to stop clock and main memory.
4	I-SPEANA	I	A/D iutput for spectrum analyser level display.
5,6	I-KEY 2,1	I	KEY 2,1 A/D input.
7	▶PRESET	O	▶PRESET LED ON/OFF output.
8	O-SHIFT	O	Microprocessor clock shift output.
9	I-RMC	I	System remote control input.
10	I-RESET	I	System reset input.
11	O-PRO LED	O	PRO LOGIC LED ON/OFF output.
12	NC	–	Not used.
13	VSS	–	GND.
14,15	XIN, XOUT	I/O	4.19MHz oscillator circuit.
16	VCC	–	Power supply.
17	O-SOL1	O	DECK 1 solenoid output.
18	O-SOL2	O	DECK 2 solenoid output.
19	⏸ SET	O	⏸ SET LED ON/OFF output.
20	I-TMBASE	I	Time-base clock (8Hz) input.
21	I-WRQ/I-RDS-CLK	I	CD WRQ input/Tuner RDS clock input.
22	O-MUTE	O	System mute output(ON/OFF).
23	O-POWER	O	System power supply ON/OFF output.
24	▶▶|/▶▶UP	O	▶▶|/▶▶UP LED ON/OFF output.
25	DATA	O	Data output for MAIN, FRONT C.B.
26	O-CLK	O	CLK output for MAIN, FRONT C.B.
27	|◀◀/◀◀ DOWN	O	|◀◀/◀◀ DOWN LED ON/OFF output.
28	VEE	–	Power supply for FL display.
29	O-PLL_CE	O	PLL IC chip enable output.
30	O-MOTOR	O	DECK motor ON/OFF output.
31	O-STB	O	Latch strobe output for MAIN C.B
32	K-SCAN	O	Key scan output.
33~42	G10~G1	O	FL grid G10~G1 output.
43~48	P22~P17	O	FL segment P22~P17 output.
49	P16/I-RDS	O/I	FL segment P16 output / RDS input to diode.
50~52	P15~P13	O	FL segment P15~P13 output.
53	P12/I-LW	O/I	FL segment P12 / LW input to diode.
54~55	P11~P10	O	FL segment P11~P10 output.
56	P9/AM10K	O/I	FL sigment P9 output / AM10K data input.
57	P8/I-HPMUTE	O/I	FL sigment P8 output / Headphone insert detect input.
58	P7/CST2	O/I	FL sigment P7 output / DECK 2 cassette detect switch data input.
59	P6/ CAM2	O/I	FL segment P6 output / DECK2 CAM switch data input.
60	P5/AUTO1	O/I	FL segment P5 output / DECK1 AUTO stop switch data input.
61	P4/AUTO2	O/I	FL segment P4 output / DECK2 AUTO stop switch data input.

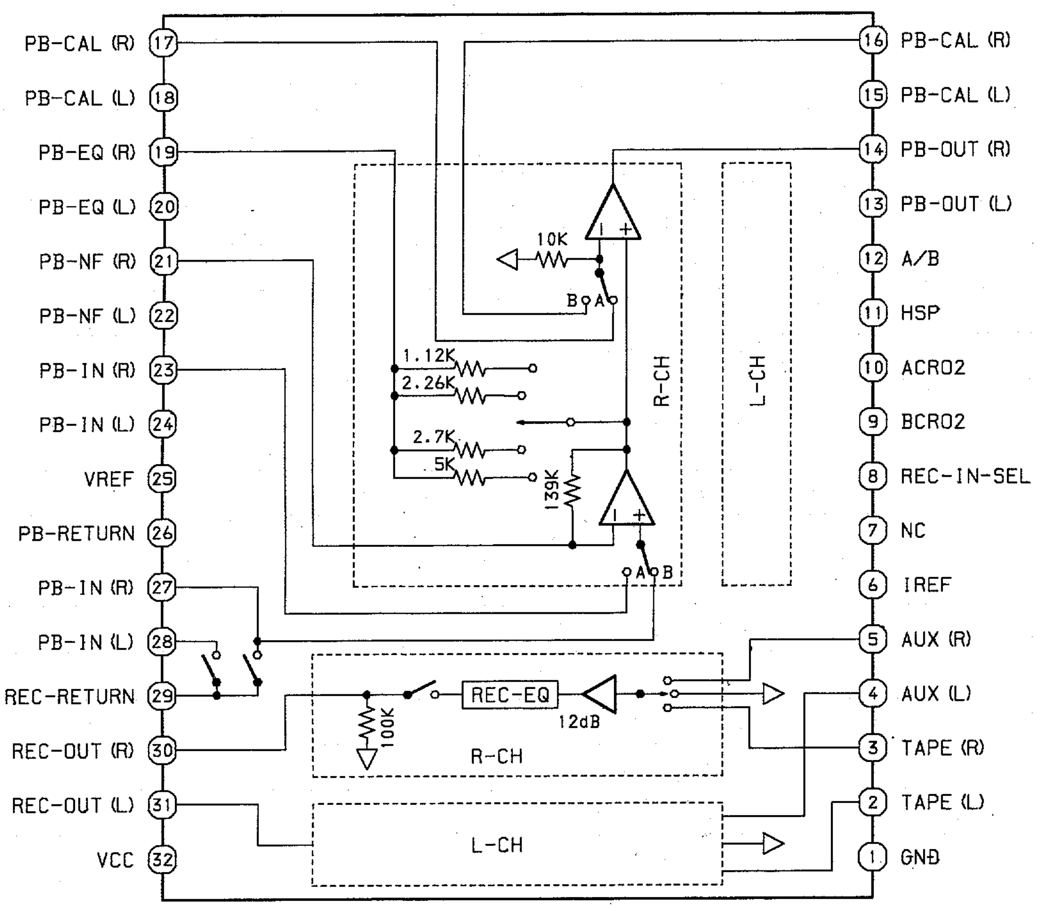
Pin No.	Pin Name	I/O	Description
62	P3/$\overline{\text{CAM1}}$	O/I	FL segment P3 output / DECK1 CAM stop switch data input.
63	P2/$\overline{\text{CST1}}$	O/I	FL segment P2 output / DECK1 cassette detect switch data input.
64	P1/$\overline{\text{REA}}$	O/I	FL segment P1 output / DECK2 side A record OK switch data input.
65	O-DISH_R	O	CD turntable reverse rotation output.
66	O-DISH_F	O	CD turntable forward rotation output.
67	I-DISH-SENS	I	CD turntable photo sensor input.
68	O-CD_CE	O	CD enable output.
69	■CLEAR	O	■CLEAR LED ON/OFF output.
70	O-CD_CLK	O	CD clock output.
71	O-DATA/I-RDS	O/I	CD data output / RDS data input.
72	I-$\overline{\text{TUNE}}$/IFC/SUBQ	I	Tuner TUNE input / Tuner IF count serial data input / CD SUBQ data input.
73	AVSS	–	GND.
74	VREF	–	Power supply.
75	I-ST/DRF	I	Tuner STEREO input / CD DRF input.
76	O-CD_OPEN	O	CD tray open data output.
77	O-CD_CLOSE	O	CD tray close data output.
78	I-CD_SW	I	CD mecha switch input.
79	O-CD_LED	O	CD flash window LED output.
80	I-SIG	I	RDS signal input.

IC BLOCK DIAGRAM

IC, BU1920FS

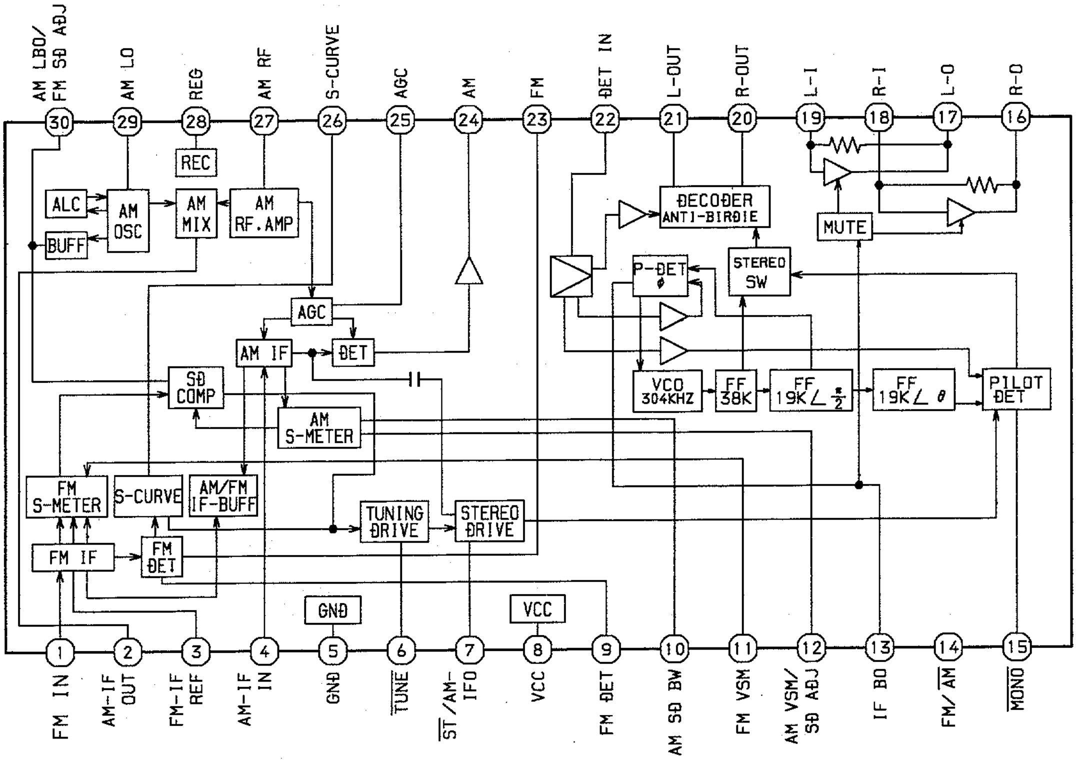

FO
CMP
4
3
ANTI-ALIASING FILTER
100K
160K
100K
MUX
1
8TH SWITCHED CAPACITOR FILTER
COMPARATOR
13
ARI
VREF
2
10
RCLK
VDD
14
12
QUAL
RESET
16
PLL 57KHz RDS/ARI
PLL 1.1875KHz
BIPHASE DECODER
DEFFERENTIAL DECODER
11
RDATA
GND
5
TEST
9
T57
CLOCK
8
7
6
15
XI
XO
T1
T2

IC, BA7762AFS



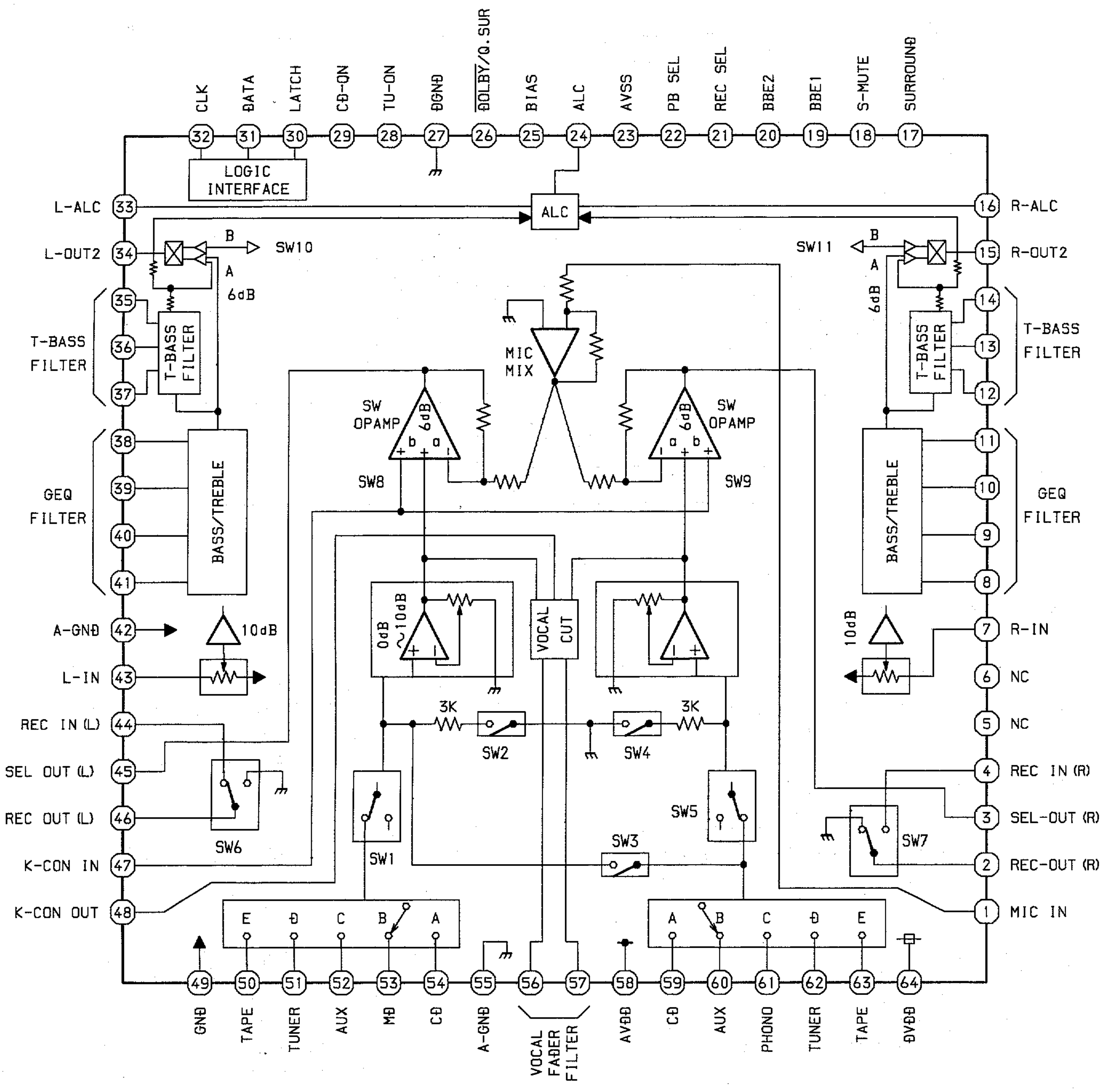
PB-CAL (R) 17
PB-CAL (L) 18
PB-EQ (R) 19
PB-EQ (L) 20
PB-NF (R) 21
PB-NF (L) 22
PB-IN (R) 23
PB-IN (L) 24
VREF 25
PB-RETURN 26
PB-IN (R) 27
PB-IN (L) 28
REC-RETURN 29
REC-OUT (R) 30
REC-OUT (L) 31
VCC 32
16 PB-CAL (R)
15 PB-CAL (L)
14 PB-OUT (R)
13 PB-OUT (L)
12 A/B
11 HSP
10 ACRO2
9 BCRO2
8 REC-IN-SEL
7 NC
6 IREF
5 AUX (R)
4 AUX (L)
3 TAPE (R)
2 TAPE (L)
1 GND
10K
B A
1.12K
2.26K
2.7K
5K
139K
A B
R-CH
L-CH
REC-EQ
12dB
100K
R-CH
L-CH

IC, LA1837NL

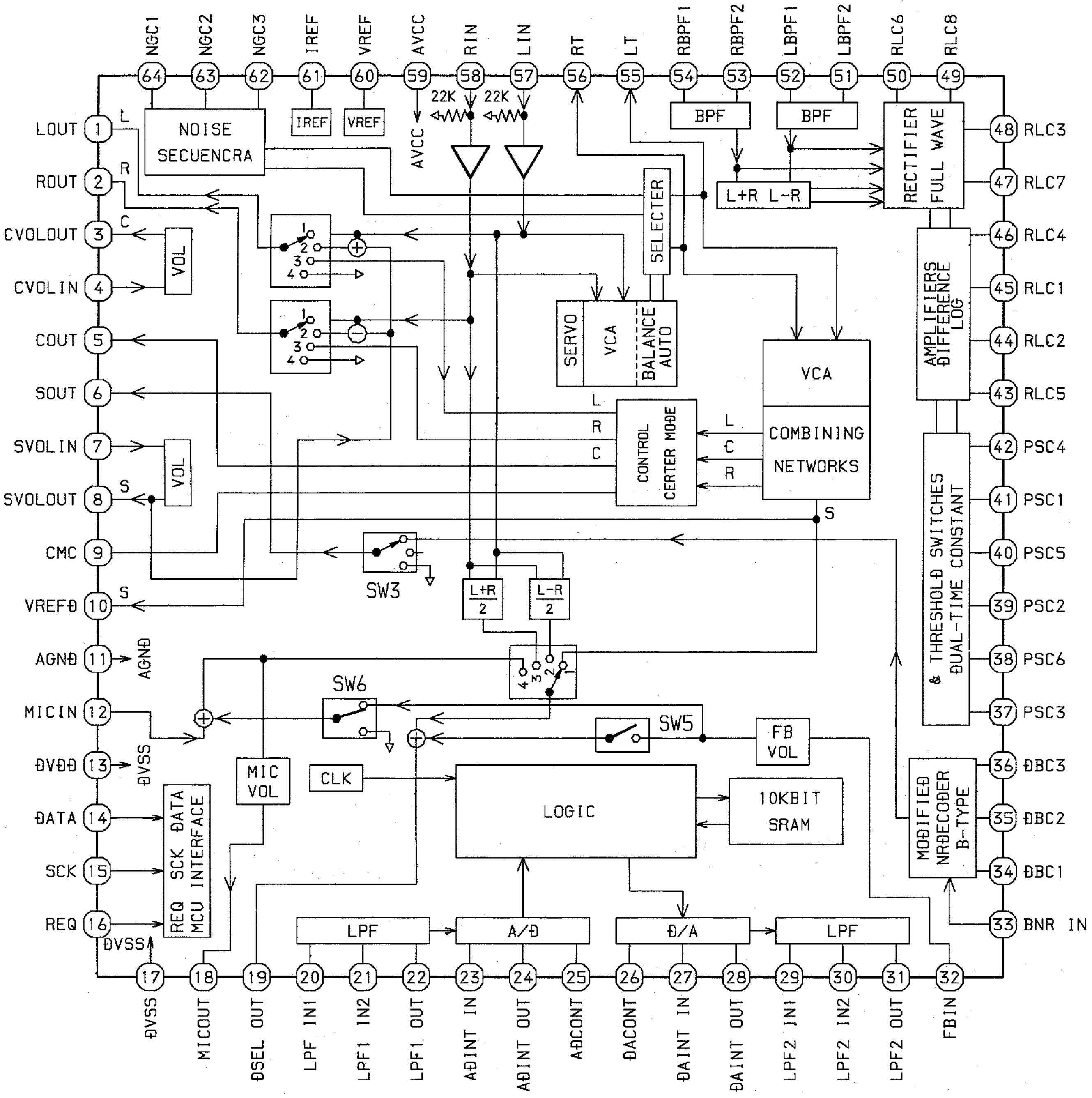


AM LBO/ FM SD ADJ 30
AM LO 29
REG 28
AM RF 27
S-CURVE 26
AGC 25
AM 24
FM 23
DET IN 22
L-OUT 21
R-OUT 20
L-I 19
R-I 18
L-O 17
R-O 16
REC
ALC
AM OSC
BUFF
AM MIX
AM RF.AMP
DECODER ANTI-BIRDIE
MUTE
STEREO SW
P-DET φ
AGC
AM IF
DET
SD COMP
VCO 304KHZ
FF 38K
FF 19K∠ π/2
FF 19K∠ θ
PILOT DET
AM S-METER
FM S-METER
S-CURVE
AM/FM IF-BUFF
TUNING DRIVE
STEREO DRIVE
FM IF
FM DET
GND
VCC
1 FM IN
2 AM-IF OUT
3 FM-IF REF
4 AM-IF IN
5 GND
6 TUNE
7 ST/AM-IFO
8 VCC
9 FM DET
10 AM SD BW
11 FM VSM
12 AM VSM/ SD ADJ
13 IF BO
14 FM/AM
15 MONO

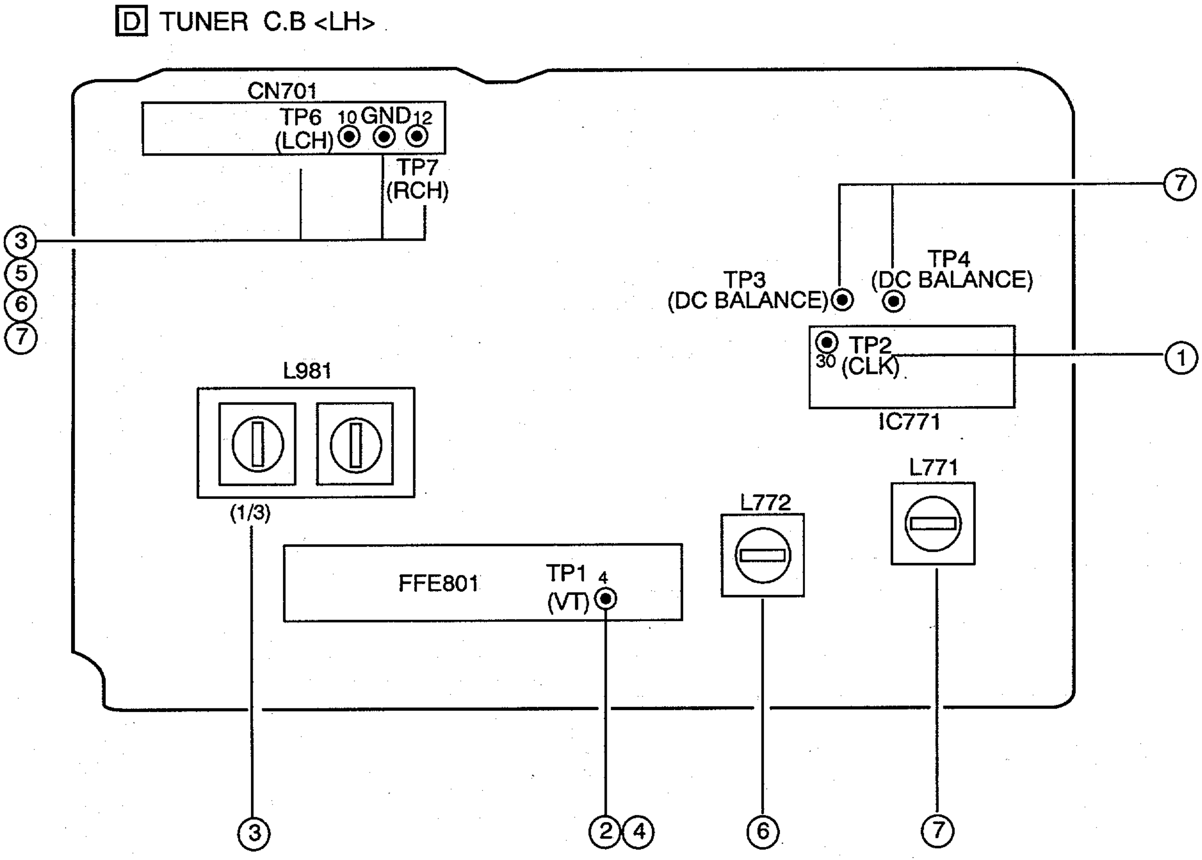
IC, M62445AFP


CLK
DATA
LATCH
CD-ON
TU-ON
DGND
DOLBY/Q.SUR
BIAS
ALC
AVSS
PB SEL
REC SEL
BBE2
BBE1
S-MUTE
SURROUND
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
LOGIC INTERFACE
L-ALC
33
ALC
16
R-ALC
L-OUT2
34
B
SW10
A
6dB
SW11
B
A
6dB
15
R-OUT2
35
36
37
T-BASS FILTER
T-BASS FILTER
14
13
12
T-BASS FILTER
MIC MIX
SW OPAMP
6dB
b a
SW8
SW OPAMP
6dB
a b
SW9
38
39
40
41
GEQ FILTER
BASS/TREBLE
BASS/TREBLE
11
10
9
8
GEQ FILTER
0dB ~10dB
VOCAL CUT
A-GND
42
10dB
10dB
7
R-IN
L-IN
43
6
NC
3K
3K
REC IN (L)
44
SW2
SW4
5
NC
SEL OUT (L)
45
4
REC IN (R)
REC OUT (L)
46
SW6
SW1
SW5
SW3
SW7
3
SEL-OUT (R)
K-CON IN
47
2
REC-OUT (R)
K-CON OUT
48
E
D
C
B
A
A
B
C
D
E
1
MIC IN
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
GND
TAPE
TUNER
AUX
MD
CD
A-GND
VOCAL FADER FILTER
AVDD
CD
AUX
PHONO
TUNER
TAPE
DVDD

IC, M62463AFP


NGC1
NGC2
NGC3
IREF
VREF
AVCC
RIN
LIN
RT
LT
RBPF1
RBPF2
LBPF1
LBPF2
RLC6
RLC8
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
22K
22K
NOISE SECUENCRA
IREF
VREF
AVCC
BPF
BPF
RECTIFIER FULL WAVE
L+R L-R
SELECTER
LOUT 1
ROUT 2
CVOLOUT 3
CVOLIN 4
COUT 5
SOUT 6
SVOLIN 7
SVOLOUT 8
CMC 9
VREFD 10
AGND 11
MICIN 12
DVDD 13
DATA 14
SCK 15
REQ 16
L
R
C
S
S
VOL
VOL
1
2
3
4
SERVO
VCA
BALANCE AUTO
VCA
COMBINING NETWORKS
CONTROL CENTER MODE
L
R
C
L
C
R
S
SW3
L+R 2
L-R 2
SW6
SW5
FB VOL
AGND
DVSS
DVSS
MIC VOL
CLK
LOGIC
10KBIT SRAM
REQ SCK DATA MCU INTERFACE
LPF
A/D
D/A
LPF
AMPLIFIERS DIFFERENCE LOG
& THRESHOLD SWITCHES DUAL-TIME CONSTANT
MODIFIED NRDECODER B-TYPE
48 RLC3
47 RLC7
46 RLC4
45 RLC1
44 RLC2
43 RLC5
42 PSC4
41 PSC1
40 PSC5
39 PSC2
38 PSC6
37 PSC3
36 DBC3
35 DBC2
34 DBC1
33 BNR IN
17 DVSS
18 MICOUT
19 DSEL OUT
20 LPF IN1
21 LPF1 IN2
22 LPF1 OUT
23 ADINT IN
24 ADINT OUT
25 ADCONT
26 DACONT
27 DAINT IN
28 DAINT OUT
29 LPF2 IN1
30 LPF2 IN2
31 LPF2 OUT
32 FBIN

ADJUSTMENT – 1 <TUNER>



< TUNER SECTION > (LH)

1. Clock Frequency Check
   Settings : • Test point : TP2
   Method : Set to AM 1710kHz and check that the test point is 2160kHz ± 45Hz.

2. AM VT Check
   Settings : • Test point : TP1
   Method : Set to AM 1710kHz and AM 530kHz and check that the test point is less than 8.5V(1710kHz) and more than 0.6V(530kHz).

3. AM Tracking Adjustment
   Settings : • Test point : TP6(Lch), TP7(Rch)
   • Adjustment location :
   L981(1/3) 1000kHz
   Method : Set to AM 1000kHz and adjust L981(1/3) so that the test point is max.

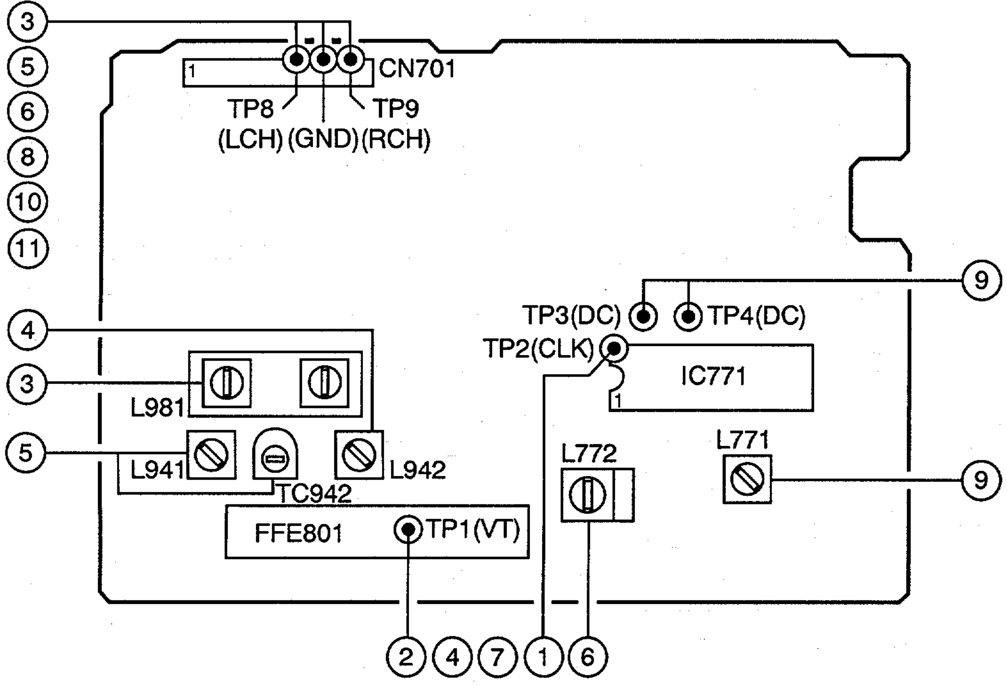
4. FM VT Check
   Settings : • Test point : TP1
   Method : Set to FM 108.0MHz and check that the test point is less than 8.0V.
   Set to FM 87.5MHz and check that the test point is more than 0.5V.

5. FM Tracking Check
   Settings : • Test point : TP6(Lch), TP7(Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 9.0dBμV.

6. AM IF Adjustment
   Settings : • Test point : TP6(Lch), TP7(Rch)
   • Adjustment location :
   L772 .... 450kHz

7. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC Balance)
   TP6(Lch), TP7(Rch) (Distortion)
   • Adjustment location : L771
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V.
   Next, check that the distortion is less than 1.3%

D TUNER C.B <EZ>



< TUNER SECTION > (EZ)

1. Clock Frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531kHz and check that the test point is more than 0.6V.

3. MW Tracking Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : L981 (1/3)
   Method : Set to MW 999kHz and adjust L981 (1/3) so that the test point becomes maximum.

4. LW VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V ± 0.05V.
   Then set to LW 290kHz and check that the test point is less than 8.0V.

5. LW Tracking Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L941 .... 144kHz
   TC942 .... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

6. AM IF Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L772 .... 450kHz

7. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 108.0MHz and check that the test point is less than 8.0V. Then set to FM 87.5MHz and check that the test point is more than 0.5V.

8. FM Tracking Check
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 13dBμV.

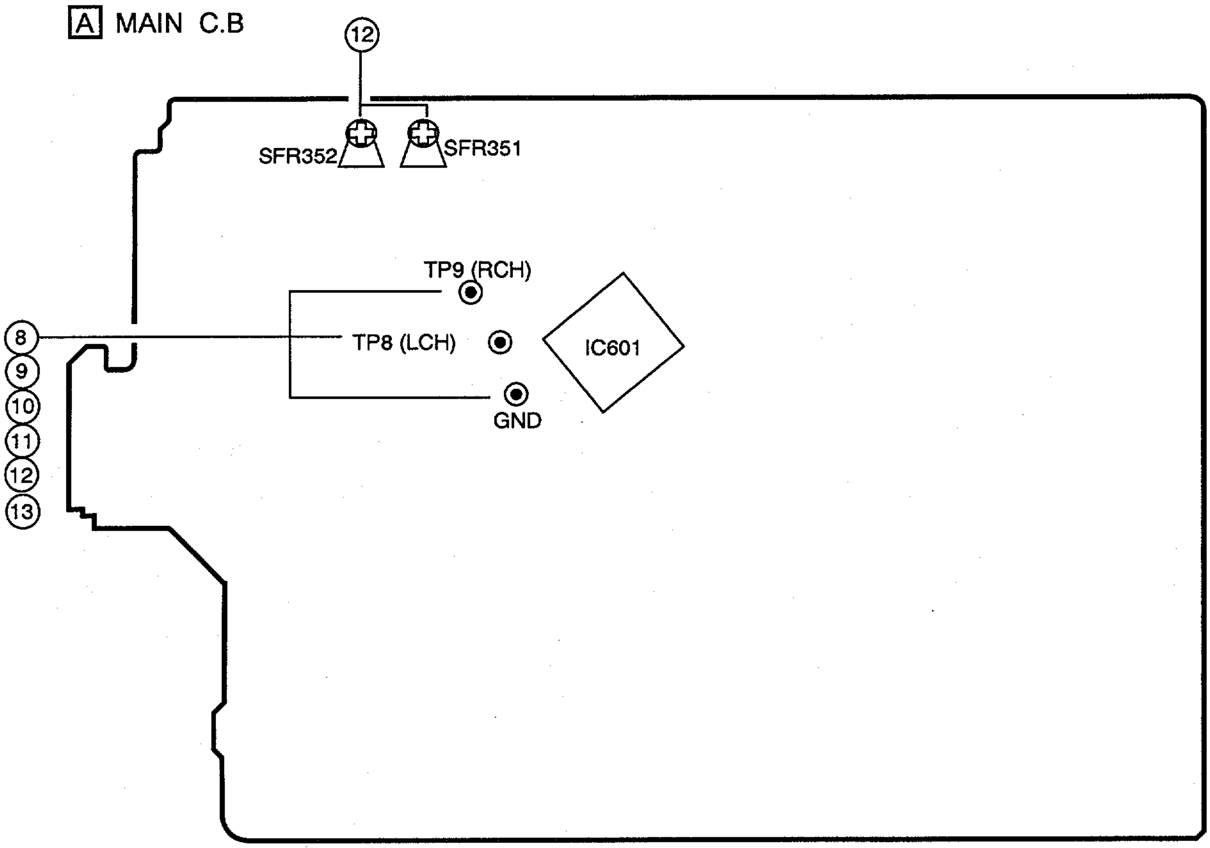
9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3,TP4 (DC balance)
   • Adjustment location : L771
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%.

10. Output Level Check
   <MW>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Input level : 74dBμV
   Method : Set to MW 999kHz and check that the test point is 130mV ± 3dB.

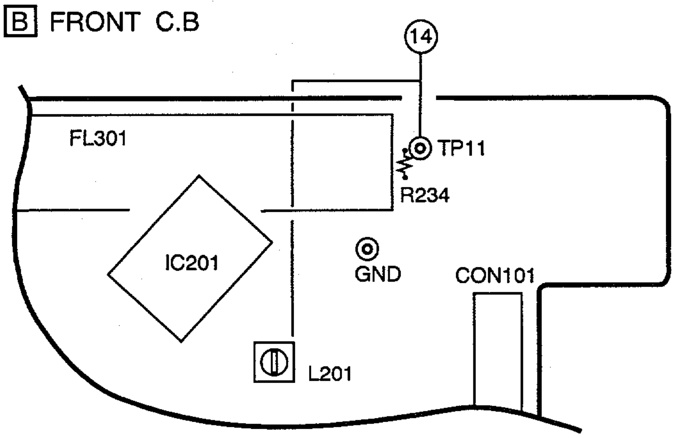
   <FM>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and check that the test point is 520mV ± 3dB.

11. FM Separation Check
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Input level :60dBμV
   Method : Set to FM 98.0MHz and check that the test point is more than 25dB.

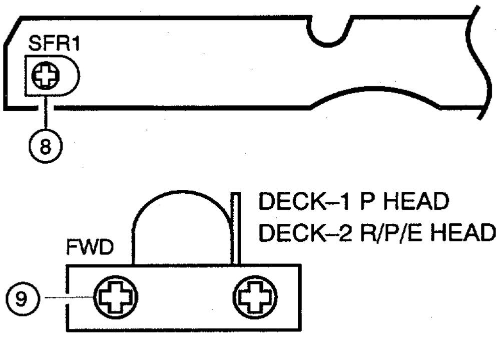
A MAIN C.B


⑫
SFR352
SFR351
TP9 (RCH)
⑧
TP8 (LCH)
IC601
GND
⑨
⑩
⑪
⑫
⑬

B FRONT C.B


⑭
FL301
TP11
R234
IC201
GND
CON101
L201

E DECK C.B


SFR1
⑧
DECK–1 P HEAD
DECK–2 R/P/E HEAD
FWD
⑨

ADJUSTMENT – 2 <DECK/FRONT>

< DECK SECTION >

8. Tape Speed Adjustment (DECK 1, DECK 2)
   Settings : • Test tape : TTA–100
   • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : SFR1
   Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

9. Head Azimuth Adjustment (DECK 1, DECK 2)
   Settings : • Test tape : TTA–330
   • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : Head azimuth adjustment screw
   Method : Play back (FWD) the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.

10. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–330
    • Test point :TP8(Lch), TP9(Rch)
    Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.

11. PB Sensitivity Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–200
    • Test point : TP8(Lch), TP9(Rch)
    Method : Play back the test tape and check that the output level of the test point is 300mV ± 3dB.

12. REC/PB Frequency Response Adjustment
    Settings : • Test tape : TTA–602
    • Test point : TP8(Lch), TP9(Rch)
    • Input signal : 1kHz / 8kHz (LINE IN)
    • Adjustment location : SFR351 (Lch)
    SFR352 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 0dB(21mV). Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

13. REC/PB Sensitivity Check
    Settings : • Test tape : TTA–602
    • Test point : TP8(Lch), TP9(Rch)
    • Input signal : 1kHz (LINE IN)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0dB (210mV). Record and play back the 1kHz signals and check that the output is 1.5dB ± 3.0dB.

< FRONT SECTION >

14. μ-CON OSC Adjustment
    Settings : • Test point : TP11
    • Adjustment location : L201
    Method : Insert AC plug with pressing TUNER function key. Adjust L201 so that the frequency across the test point is 233.97Hz ± 0.23Hz.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity : (THD 3%)	LH: Less than 10 / 9 / 9dBμV EZ: Less than 14 / 13 / 13dBμV [at 87.5 / 98.0 / 108.0MHz]
S/N 50dB Quieting sensitivity :	LH: Less than 35dBμV EZ: Less than 38dBμV [at 98.0MHz]
Signal to noise ratio :	Mono : More than 68dB Stereo : LH: More than 66dB EZ: More than 64dB [at 98.0MHz]
Distortion :	Mono : Less than 1.2% Stereo : Less than 2.0% [at 98.0MHz]
Auto stop level :	25dBμV +10dB/-14dB [at 98.0MHz]
Stereo separation :	LH: More than 22dB EZ: More than 12dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

<MW/AM SECTION>

Sensitivity :	Less than 60dBμV [at 600kHz] Less than 58dBμV [at 1000 / 1400kHz]
Signal to noise ratio :	More than 36dB (mono) More than 34dB (stereo) [at 1000kHz]
Distortion :	Less than 1.5% (mono)

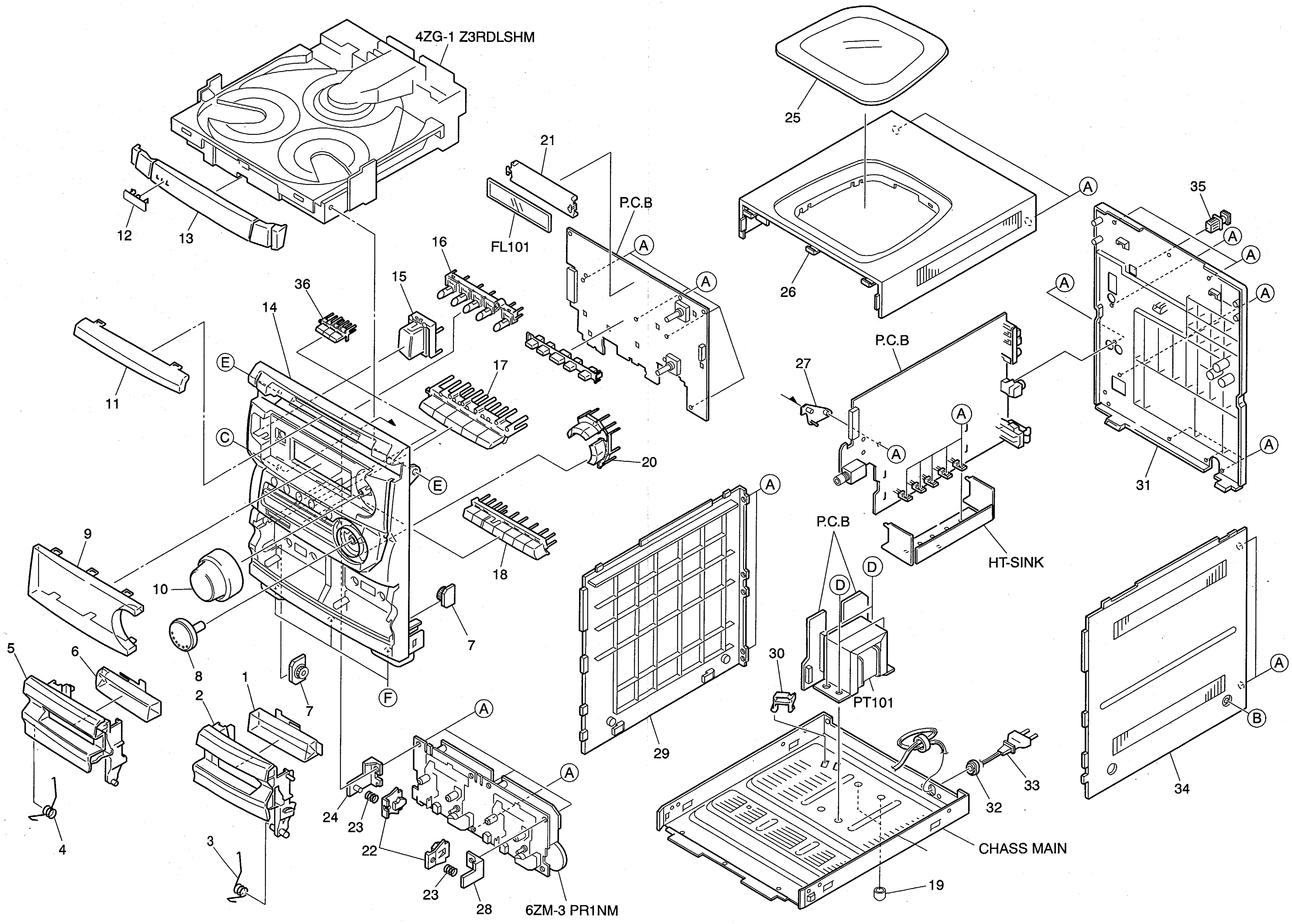
<LW SECTION> (EZ)

Sensitivity :	Less than 70dBμV [at 144kHz] Less than 68dBμV [at 198 / 290kHz]
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.25% (W.R.M.S)
Take-up torque :	30 ~ 55g-cm
F.F torque :	75 ~ 180g-cm
REW torque :	130 ~ 75g-cm
Back tension :	2 ~ 7g-cm
PB output level :	2.8V ± 3.0dB
REC/PB output level :	2V ± 3.0dB (0VU, NORM)
Distortion (REC/PB) :	Less than 2.0% (0VU)
Noise level (PB) :	Less than 20mV (NORM, FILTER DIN AUDIO)
Noise level (REC/PB) :	Less than 30mV (NORM, FILTER DIN AUDIO)
Erasing ratio :	More than 60dB (at 125Hz, +10VU)
Test tape :	TTA–602 (NORMAL) TTA–100

MECHANICAL EXPLODED VIEW 1 / 1


4ZG-1 Z3RDLSHM
12
13
11
14
36
15
16
21
FL101
P.C.B
Ⓐ
Ⓐ
Ⓔ
Ⓒ
17
Ⓔ
20
9
10
18
8
7
7
5
6
2
1
Ⓕ
4
3
Ⓐ
Ⓐ
24
23
22
23
28
6ZM-3 PR1NM
29
Ⓐ
25
Ⓐ
26
35
Ⓐ
Ⓐ
Ⓐ
Ⓐ
P.C.B
27
Ⓐ
Ⓐ
31
Ⓐ
HT-SINK
P.C.B
Ⓓ
Ⓓ
30
PT101
Ⓐ
Ⓑ
34
33
32
CHASS MAIN
19

MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

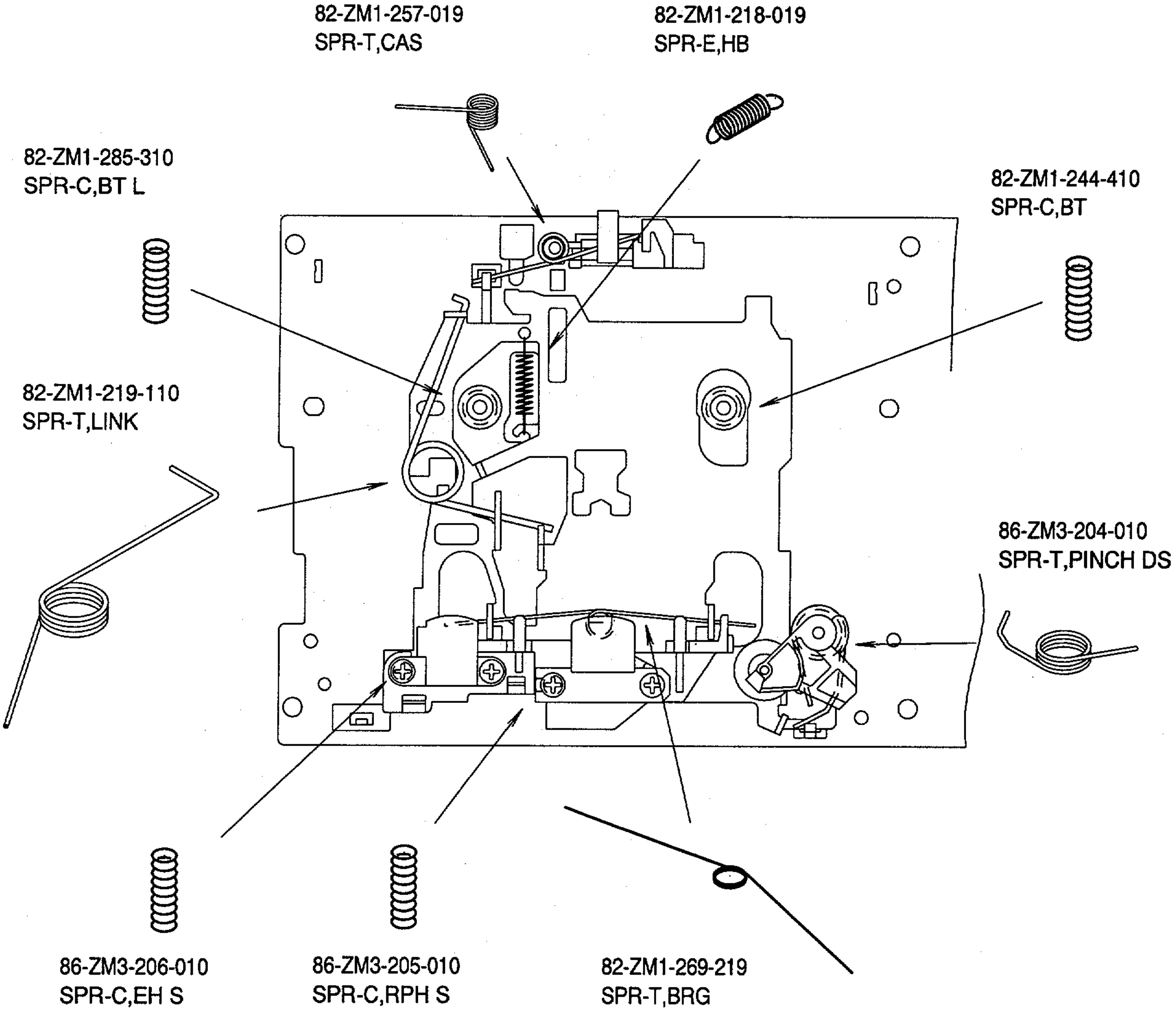
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NF9-008-010		WINDOW,CASS 2
2	8Z-NF9-004-010		BOX,CASS 2
3	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
4	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
5	8Z-NF9-003-010		BOX,CASS 1 1WAY
6	8Z-NF9-007-010		WINDOW,CASS 1
7	87-NF8-220-010		DMPR,150
8	8Z-NF9-010-010		KNOB,RTRY JOG
9	8Z-NFW-008-010		WINDOW,DISP H<LH>
9	8Z-NFW-006-010		WINDOW,DISP EZ<EZ>
10	8Z-NF9-009-010		KNOB,RTRY VOL
11	8Z-NF9-005-010		WINDOW,CD
12	82-NE6-067-010		BADGE,AIWA 30N
13	8Z-NF9-002-010		PANEL,TRAY H
14	8Z-NFW-001-010		CABI,FR U<LH>
14	8Z-NFW-007-010		CABI,FR EZ<EZ>
15	8Z-NF9-011-010		KEY,POWER
16	8Z-NFW-003-010		KEY,PRO
17	8Z-NF9-013-010		KEY,ASSY OPE 1W
18	8Z-NF9-016-010		KEY,CD

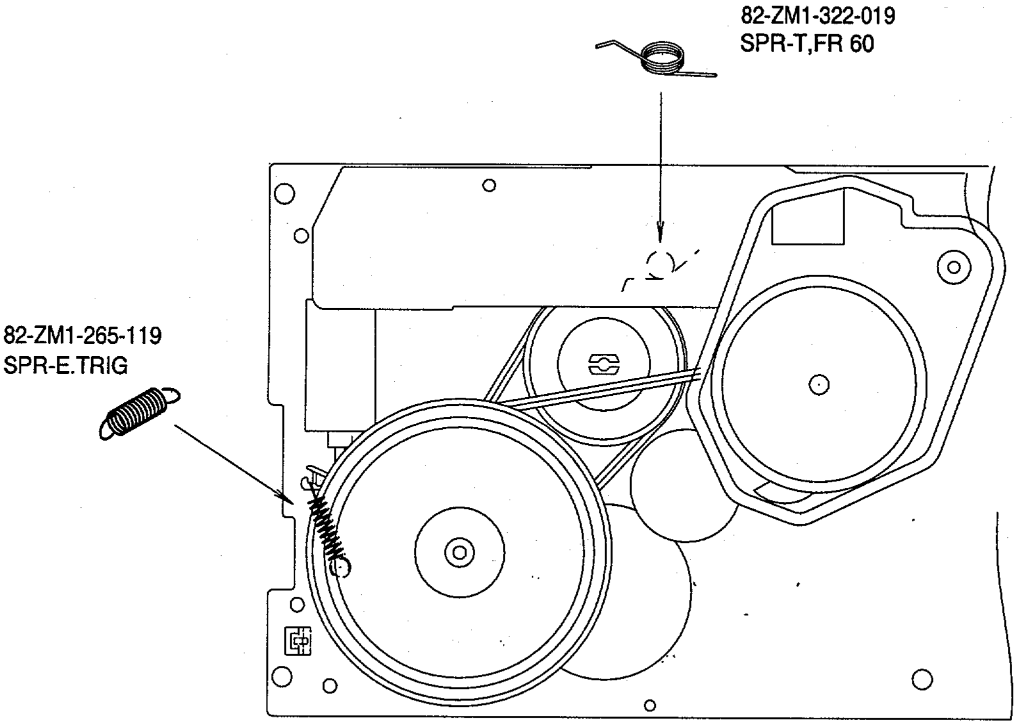
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
19	8Z-NB8-240-010		COVER, PL
20	8Z-NF9-017-010		KEY,GEQ
21	82-NF7-210-110		GUIDE,FL (*)
22	82-NF5-229-010		PLATE,LOCK
23	86-NF9-224-010		SPR-C,LOCK
24	87-NF4-216-010		HLDR,LOCK 1
25	86-NFZ-001-010		WINDOW,TOP
26	8Z-NF9-042-010		PANEL,TOP V-2
27	88-NF5-208-010		HLDR,PWB-M N
28	87-NF4-217-110		HLDR,LOCK 2
29	8Z-NB8-011-110		PANEL,LEFT V-2
30	87-NF4-221-010		HLDR,CABLE
31	8Z-NFW-016-010		CABI,REAR LHSTM<LH>
31	8Z-NFW-017-010		CABI,REAR EZSTE<EZ>
32	87-085-185-010		BUSHING, AC CORD (E)
⚠ 33	87-050-079-010		AC-CORD ASSY,E
34	8Z-NF9-043-010		PANEL,RIGHT S V-2
35	84-ZG1-245-210		CAP,OPTICAL
36	8Z-NF9-018-010		KEY,RDS<EZ>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-689-010		TAPPING SCREW, BVTT+3-8
C	87-721-096-410		QT2+3-10 GLD
D	87-067-975-010		S-SCREW,IT+4-8
E	87-721-097-410		QT2+3-12 GLD
F	87-067-641-010		UTT2+3-8(W/O SLOT)BL

COLOR NAME TABLE

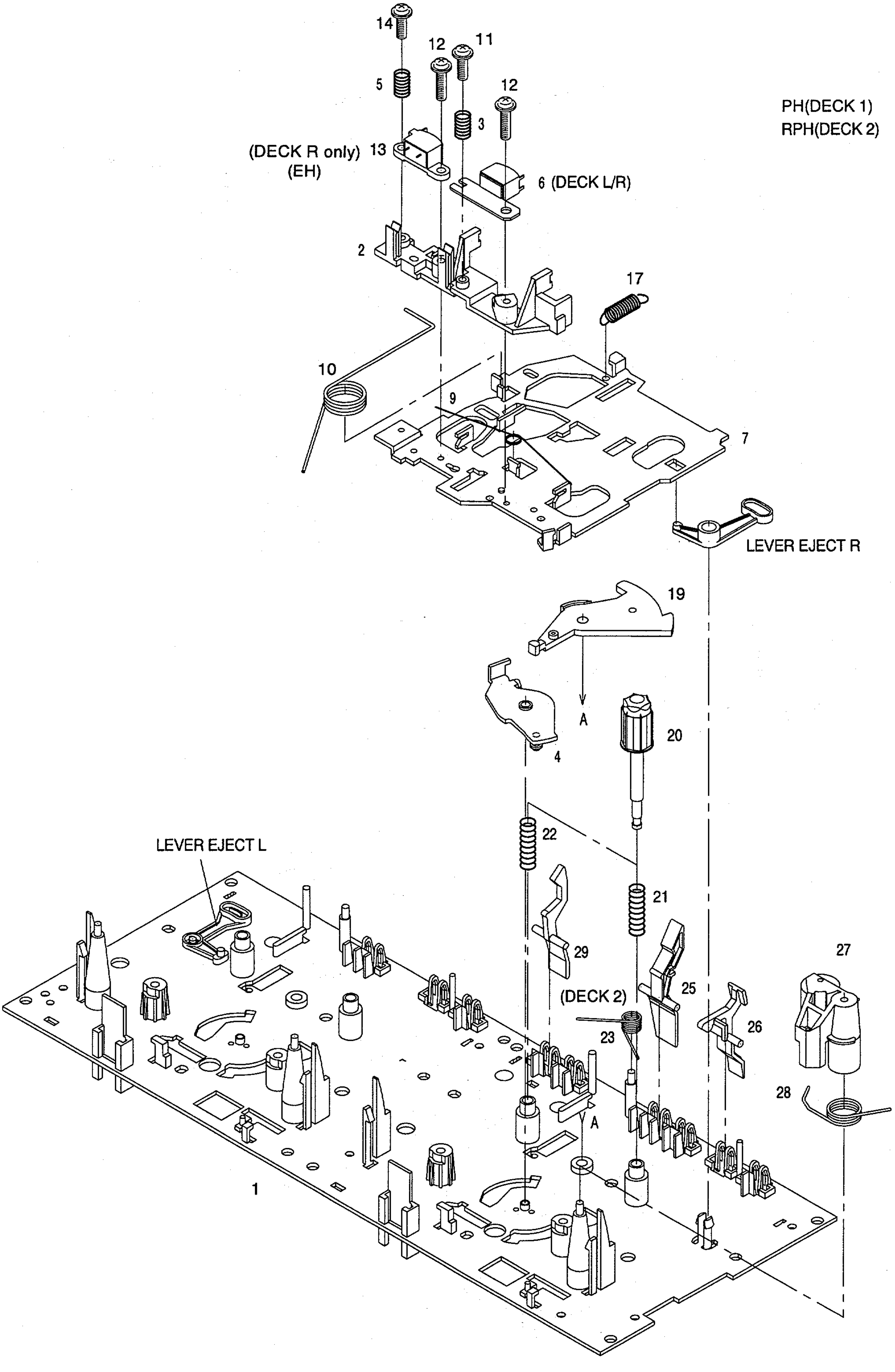
Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

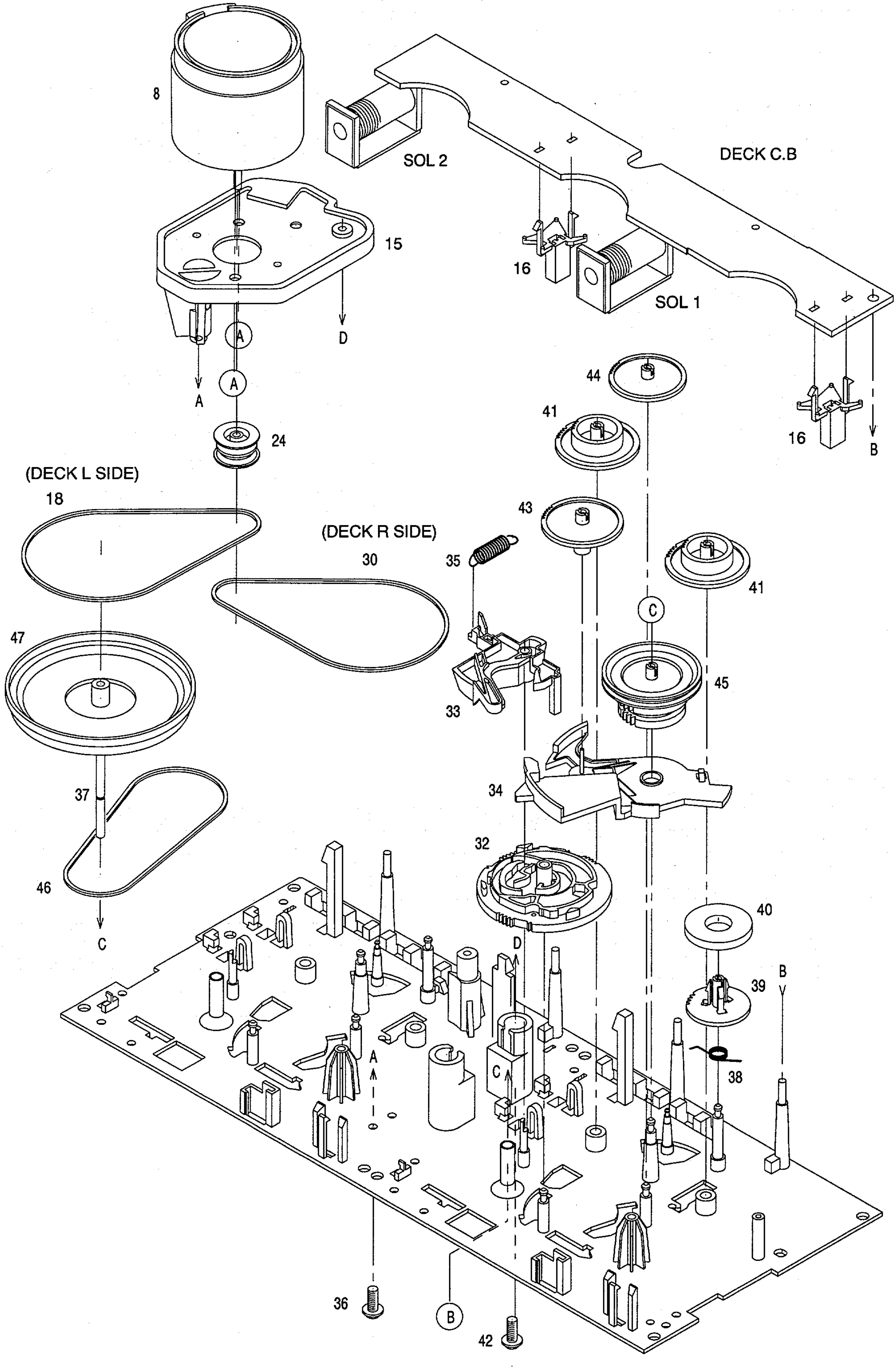
SPRING APPLICATION POSITION


82-ZM1-257-019
SPR-T,CAS
82-ZM1-218-019
SPR-E,HB
82-ZM1-285-310
SPR-C,BT L
82-ZM1-244-410
SPR-C,BT
82-ZM1-219-110
SPR-T,LINK
86-ZM3-204-010
SPR-T,PINCH DS
86-ZM3-206-010
SPR-C,EH S
86-ZM3-205-010
SPR-C,RPH S
82-ZM1-269-219
SPR-T,BRG


82-ZM1-322-019
SPR-T,FR 60
82-ZM1-265-119
SPR-E.TRIG

TAPE MECHANISM EXPLODED VIEW 1 / 1


14
12
11
5
12
3
PH(DECK 1)
RPH(DECK 2)
(DECK R only) 13
(EH)
6 (DECK L/R)
2
17
10
9
7
LEVER EJECT R
19
A
4
20
22
LEVER EJECT L
21
29
27
25
(DECK 2)
26
23
28
A
1


8
SOL 2
DECK C.B
15
16
SOL 1
A
A
A
D
44
41
16
B
24
(DECK L SIDE)
18
(DECK R SIDE)
30
43
35
41
C
47
33
45
34
37
32
40
46
C
D
B
39
A
C
38
36
B
42

TAPE MECHANISM PARTS LIST 1 / 1

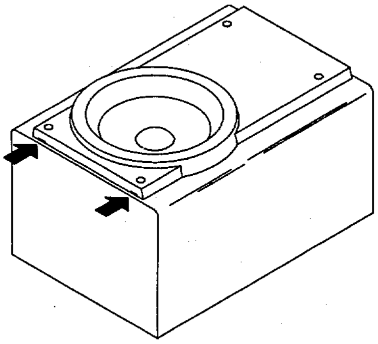
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM3-212-010		CHAS ASSY,SS
2	86-ZM3-202-010		BASE,HEAD S
3	86-ZM3-205-010		SPR-C,RPH S
4	82-ZM1-333-210		PLATE,LINK 2
5	86-ZM3-206-010		SPR-C,EH S
6	87-A90-403-019		HEAD,RPH MS15R
7	86-ZM3-201-010		CHAS,HEAD S
8	87-045-347-019		MOT,SHU2L 70(M1)
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM3-323-119		SPR-T,LINK
11	86-ZM3-209-010		S-SCREW,ASIMUTHS
12	86-ZM3-207-010		S-SCREW,RPH
13	87-A90-404-019		HEAD,EH LE15B
14	86-ZM3-208-010		S-SCREW,EH
15	86-ZM3-203-010		HLDR,MOTS
16	82-ZM1-245-210		HLDR,IC
17	82-ZM1-218-019		SPR-E,HB
18	86-ZM3-211-010		BELT,RS
19	82-ZM1-222-219		LVR,PLAY
20	82-ZM1-217-419		REEL,TABLE
21	82-ZM1-244-519		SPR-C,BT
22	82-ZM1-285-410		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM3-221-010		PULLEY,MOT 2M
25	82-ZM1-242-019		LE=VR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-344-119		LVR ASSY,PINCH
28	86-ZM3-204-010		SPR-T,PINCHDS
29	82-ZM1-240-119		LVR,REC (DECK 2)
30	86-ZM3-210-010		BELT,PS
31	82-ZM1-223-010		GEAR,PLAY
32	82-ZM3-305-019		GEAR,CAM M2
33	82-ZM1-227-319		LVR,TRIG
34	82-ZM3-306-110		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	85-ZM3-203-019		S-SCREW MOTOR M3
37	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-319		GEAR,REEL
42	86-ZM3-213-010		S-SCREW,HLDR MOT 3
43	82-ZM1-225-219		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM3-333-210		SLIP DISK ASSY 2
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-349-019		FLY-WHL RW (DECK L)

SPEAKER DISASSEMBLY INSTRUCTIONS

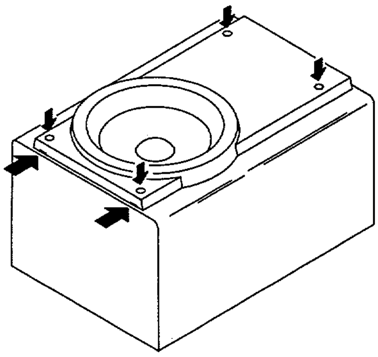
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



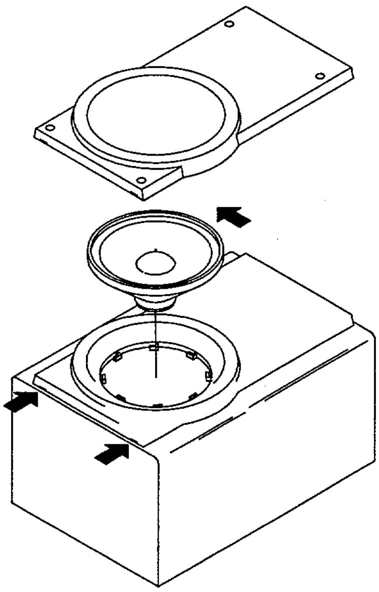
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

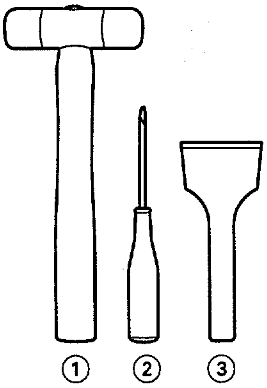


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

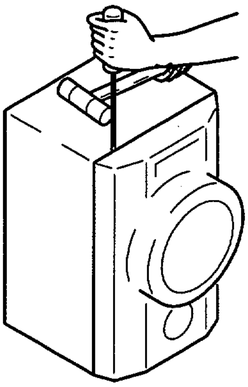


Fig-1

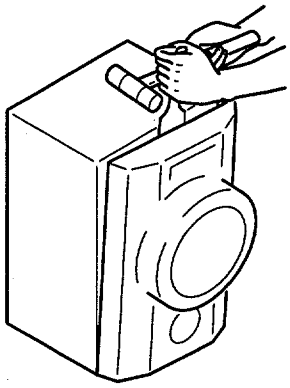


Fig-2

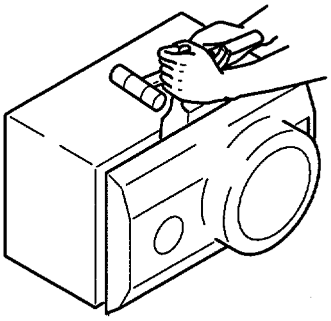


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST

SX-NS332 (YLSTCC, YLSTC1C)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NSK-001-010		PANEL,FR
2	8Z-NSK-002-010		PANEL,BA
3	87-NSH-612-010		SPKR,CERAMIC ASSY
4	87-NS7-611-010		CORD,SPKR
5	87-NSJ-602-010		SPKR,120<YLSTCC>
5	8Z-NSK-602-010		SPKR,W 120<YLSTC1C>

SX-NAV224 (YBL, YTL)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NSW-002-010		GRILLE,FRAME ASSY
2	83-096-614-010		SPKR,CORD
3	8Z-NSW-602-010		SPKR,W 140
4	8Z-NSW-604-010		SPKR,T 60
5	88-NS3-605-010		CAP

SX-CR677 (YSTC, YSTCC)

NOTE: This SX-CR677 speaker contains SX-C607 (center speaker) and SX-R277 (rear speaker).

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-YS1-001-010		CABI,REAR
2	8Z-YS1-002-010		GRILLE,FRAME ASSY
3	81-VSA-009-010		CORD,BUSH
4	87-010-384-010		CAP,E 100-25 M SME
5	87-YS6-002-010		SPKR,CORD Y
6	8Z-YS1-601-010		SPKR,100
7	87-YS7-012-010		PANEL,FR S
8	87-YS7-013-010		PANEL,REAR S
9	81-VSA-009-010		CORD BUSH
10	87-YS3-003-010		GRILLE,FRAME ASSY
11	83-NSM-010-010		SPKR,CORD
12	87-YS7-602-010		SPKR, 100

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-NFW-902-010		IB,LH(ESP)M
1	8Z-NFW-906-010		IB,EZ(9L)E
2	8Z-NFW-702-010		RC UNIT,ZAS10
3	87-006-225-010		AM LOOP ANT NC2
4	87-043-115-010		ANT,FEEDER FM
5	87-043-106-010		WIRE, FM ANT (Z)
⚠ 6	87-A91-017-010		PLUG, CONVERSION JT-0476

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
	SERGE SUPPRESSOR
	CAP, CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
	ARM, SHAFT
	GUIDE, SHAFT
	STRAP
	S-SCREW
	HINGE
	S-SCREW
	SCREW, SERPART

サービス技術ニュース	
番号	連絡内容
G— —	
G— —	
G— —	

アイワ株式会社
AIWA CO.,LTD.

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Tokyo Japan

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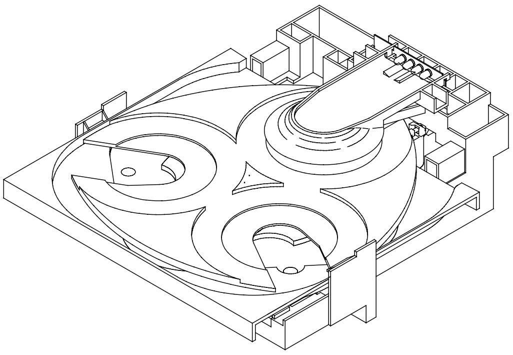
aiwa

aiwa SERVICE

4ZG-1



CD MECHANISM

- BASIC CD MECHANISM:3ZG-2 E1
- TYPE: English

SERVICE MANUAL

BASIC NAME	DERIVATION NAME					
4ZG-1	V	O	S1	D	SH	

■ This Service Manual has various derivation.Derivation name is indicated by the Service Manual for each model.

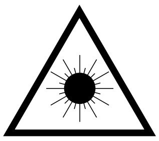
S/M Code No. 09-985-249-80T

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

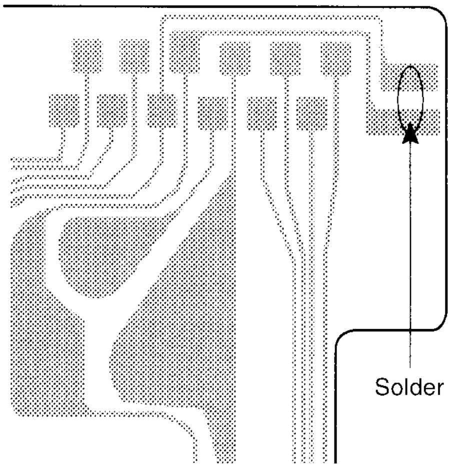
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



This is the SERVICE MANUAL for the BASIC CD MECHANISM of BASIC NAME: 4ZG-1. This BASIC NAME includes the following models as shown under the SUFFIX name: DERIVATION NAME. Please use this manual with the separate SERVICE MANUAL for DERIVATION NAME.

BASIC CD MECHANISM: 4ZG-1 VOS1DSH

SUFFIX
(DERIVATION NAME)

BASIC NAME: 4ZG-1

BASIC NAME	DERIVATION NAME							
4ZG-1	V	O	S1	D	SH	—	—	—

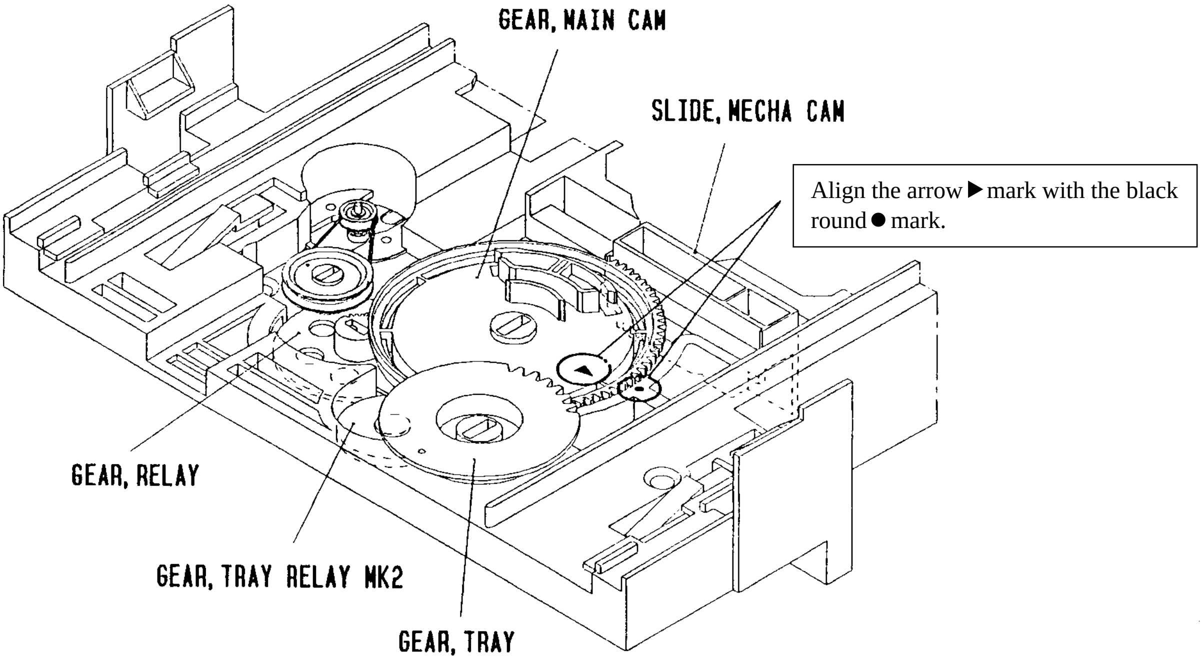
DERIVATION NAME

V:	VIDEO OUT
O:	On screen display
S1:	THE 1st SONY IC MODEL
D:	Digital output function
SH:	Pick up equipped with shutter

How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.


GEAR, MAIN CAM
SLIDE, MECHA CAM
GEAR, RELAY
GEAR, TRAY RELAY MK2
GEAR, TRAY

Align the arrow ▶ mark with the black round ● mark.

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	84-ZG1-697-010		C-IC,UPD78016FGC-549
	87-017-825-010		IC,GP1F32T
	87-017-760-080		IC,M51943BML
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-001-873-010		IC,LB1644
	87-A20-920-010		C-IC,CL680-D1
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-656-040		C-IC,MB81V4260S-60/70PFTN
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-974-040		C-IC,LC74781M-9017
	87-A20-918-040		C-IC,SM5878AM
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-231-080		CHIP-TRANSISTER,DTA124XK
	87-A30-117-010		TR,2SA1357
	89-111-625-080		TR,2SA1162 (0.15W)
	87-026-580-080		C-TR,DTA123JK
	87-026-470-080		TR,HN1C03F (0.3W)
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
	87-017-024-040		C-DIODE,DA204K
	87-A40-180-040		C-DIODE,SB07-015C
	87-A40-384-080		C-ZENER,UDZ3.3B
3CD C.B			
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-404-040		CAP,E 4.7-50 SME
C106	87-016-369-080		C-CAP,S 0.033-25 B K
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-401-040		CAP,E 1-50 SME
C109	87-010-382-040		CAP,E 22-25 SME
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-263-040		CAP,E 100-10
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-016-369-080		C-CAP,S 0.033-25 B K
C114	87-016-369-080		C-CAP,S 0.033-25 B K
C115	87-016-369-080		C-CAP,S 0.033-25 B K
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-012-154-080		C-CAP,S 150P-50 CH
C118	87-010-494-040		CAP,E 1-50 GAS
C119	87-010-152-080		C-CAP,S 8P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B
C121	87-010-992-080		C-CAP,S 0.047-25 B
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-555-040		CAP,E 100-10 GAS
C130	87-010-555-040		CAP,E 100-10 GAS
C131	87-010-555-040		CAP,E 100-10 GAS
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-555-040		CAP,E 100-10 GAS
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-182-080		C-CAP,S 2200P-50 B
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-010-112-040		CAP,E 100-16
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-213-080		C-CAP,S 0.015-50 B
C151	87-010-263-040		CAP,E 100-10
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-040		CAP,E 220-10 M PW
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-010-992-080		C-CAP,S 0.047-25 B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-010-314-080		C-CAP,S 22P-50V
C161	87-010-182-080		C-CAP,S 2200P-50 B
C162	87-010-178-080		CHIP CAP 1000P
C201	87-016-669-080		C-CAP,S 0.1-25 K B
C204	87-010-197-080		CAP, CHIP 0.01 DM
C205	87-010-379-040		CAP,E 22-16 M SME
C206	87-010-322-080		C-CAP,S 100P-50 CH
C207	87-010-322-080		C-CAP,S 100P-50 CH
C208	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-016-669-080		C-CAP,S 0.1-25 K B
C211	87-010-263-040		CAP,E 100-10
C213	87-010-190-080		S CHIP F 0.01
C214	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-982-040		CAP,E 33-25 GAS
C306	87-010-112-040		CAP,E 100-16
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-263-040		CAP,E 100-10
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-263-040		CAP,E 100-10
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C320	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-016-044-040		CAP,E 100-16 GAS
C402	87-010-190-080		S CHIP F 0.01
C403	87-010-190-080		S CHIP F 0.01
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-154-080		CAP CHIP 10P
C505	87-010-154-080		CAP CHIP 10P
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-263-040		CAP,E 100-10
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-263-040		CAP,E 100-10
C511	87-016-669-080		C-CAP,S 0.1-25 K B
C512	87-010-197-080		CAP, CHIP 0.01 DM
C513	87-010-197-080		CAP, CHIP 0.01 DM
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-010-322-080		C-CAP,S 100P-50 CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH
C521	87-012-154-080		C-CAP,S 150P-50 CH
C522	87-010-371-080		CAP, ELECT 470-6.3V
C523	87-010-197-080		CAP, CHIP 0.01 DM
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM
C532	87-010-374-040		CAP,E 47-10
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-555-040		CAP,E 100-10 GAS
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-078-040		CAP,E 47-6.3 5L
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-016-669-080		C-CAP,S 0.1-25 K B
C540	87-010-078-040		CAP,E 47-6.3 5L
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-010-318-080		C-CAP,S 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C549	87-010-494-040		CAP,E 1-50 GAS
C550	87-010-196-080		CHIP CAPACITOR,0.1-25
C551	87-012-153-080		C-CAP,S 120P-50 CH
C552	87-016-526-080		C-CAP,S 0.47-16 BK
C554	87-010-197-080		CAP, CHIP 0.01 DM
C556	87-010-378-040		CAP,E 10-16
C557	87-010-316-080		C-CAP,S 33P-50 CH
C558	87-010-315-080		C-CAP,S 27P-50 CH
C560	87-010-197-080		CAP, CHIP 0.01 DM
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-010-197-080		CAP, CHIP 0.01 DM
C603	87-010-112-040		CAP,E 100-16
C604	87-010-196-080		CHIP CAPACITOR,0.1-25
C605	87-010-197-080		CAP, CHIP 0.01 DM
C606	87-010-197-080		CAP, CHIP 0.01 DM
C607	87-010-313-080		CAP, CHIP 18P
C608	87-010-313-080		CAP, CHIP 18P
C609	87-010-178-080		CHIP CAP 1000P
C610	87-010-178-080		CHIP CAP 1000P
C611	87-010-178-080		CHIP CAP 1000P
C612	87-010-178-080		CHIP CAP 1000P
C613	87-010-403-040		CAP,E 3.3-50 SME
C614	87-010-403-040		CAP,E 3.3-50 SME
C615	87-010-318-080		C-CAP,S 47P-50 CH
C616	87-010-318-080		C-CAP,S 47P-50 CH
CN101	87-A60-424-010		CONN,16P V TOC-B
CN102	87-099-199-010		CONN,6P 6216 H
CN401	87-099-212-010		CONN,5P 6216 V
CN403	87-099-030-010		CONN,13P 6216H
J501	87-009-502-010		JACK,PIN 1P Y EARTH
L101	87-005-196-080		COIL,10UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L508	87-005-817-080		C-COIL, 33UH J FLC32
M401	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R130	87-022-364-080		C-RES,S 82K-1/10W F
R131	87-022-364-080		C-RES,S 82K-1/10W F
R132	87-022-364-080		C-RES,S 82K-1/10W F
R133	87-022-364-080		C-RES,S 82K-1/10W F
R134	87-022-364-080		C-RES,S 82K-1/10W F
R135	87-022-364-080		C-RES,S 82K-1/10W F
R507	87-A00-408-080		C-RES,S 2K-1/10W D
S201	87-A90-162-010		SW,SL 1-1-3 SSSU
S401	87-036-109-010		PUSH SWITCH
S402	87-036-109-010		PUSH SWITCH
W1	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N
W2	85-NFT-611-110		FF-CABLE 16P-1.0
W3	84-ZG1-630-010		CABLE FFC 6P-1.25
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X601	87-030-270-080		VIB,XTAL 16.9344MHZ

LED C.B

LED401	87-070-200-080		LED,SLP636C-81-S-T1
LED402	87-017-350-080		LED,SEL1550CM
LED403	87-017-350-080		LED,SEL1550CM
LED404	87-070-200-080		LED,SLP636C-81-S-T1

T-T C.B

C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
PS401	87-026-573-010		IC,GP1S53V

DRIVE C.B

CN3	87-009-349-010		CONN,6P H WHT PH
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVPO

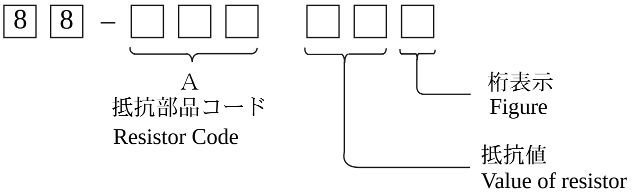
CD MOTOR C.B

CN4	87-099-210-010		CONN,5P H BLK 6216
M1	87-045-305-010		MOT,RF-500TB
SW1	87-035-110-010		SW,MICRO SPPB62
SW2	87-035-110-010		SW,MICRO SPPB62

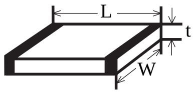
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

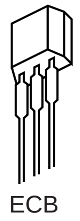
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding


8 8 – □□□ □□□
A
抵抗部品コード
Resistor Code
桁表示
Figure
抵抗値
Value of resistor

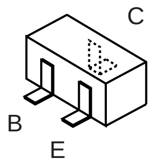
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード　: A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

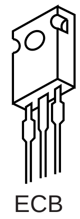
TRANSISTOR ILLUSTRATION



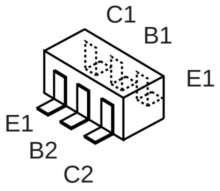
2SA933S



2SA1162
2SC2712
DTA123JK
DTA124XK
DTC124XK

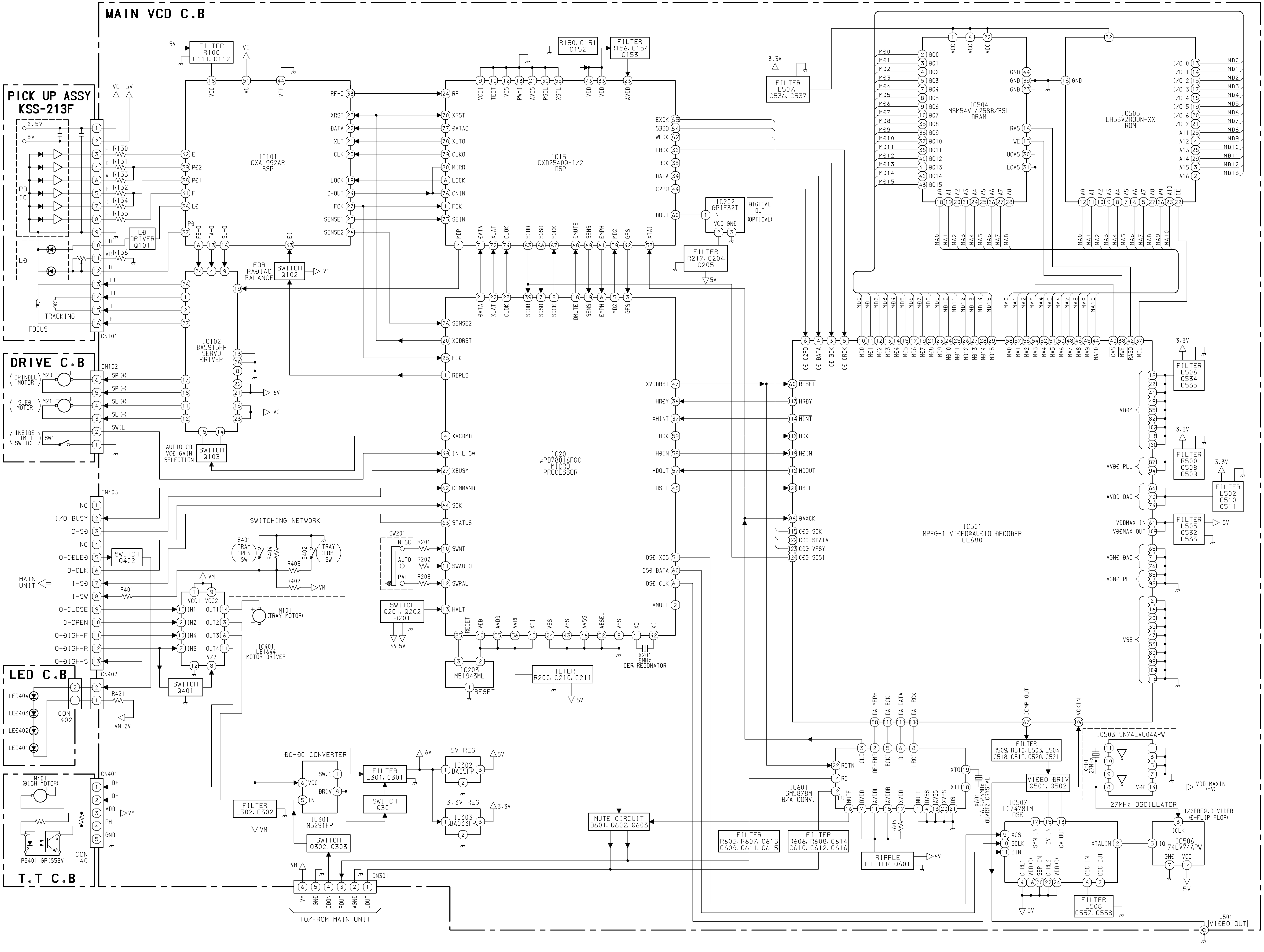


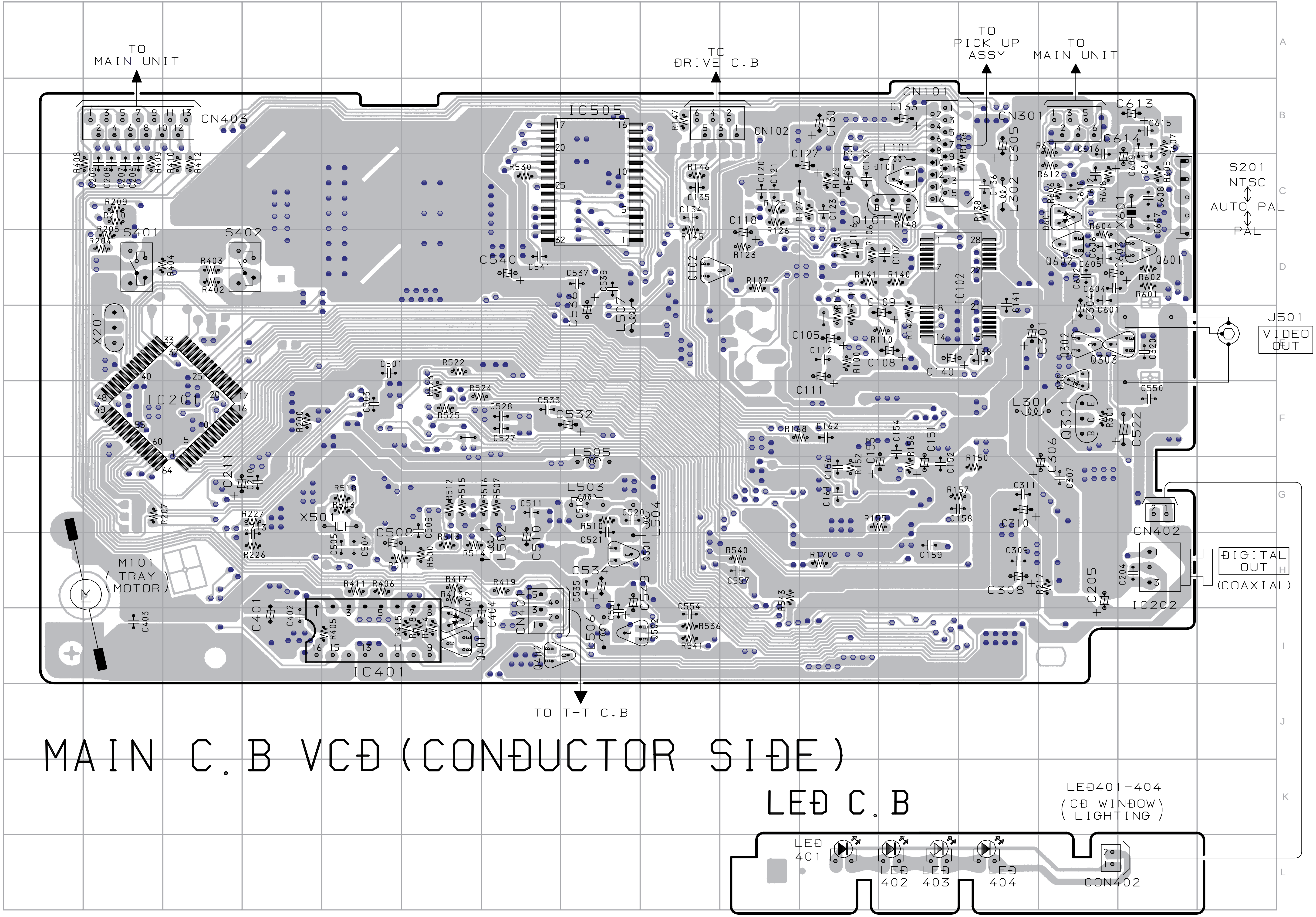
2SA1357


C1
B1
E1
E1
B2
C2

HN1C03F

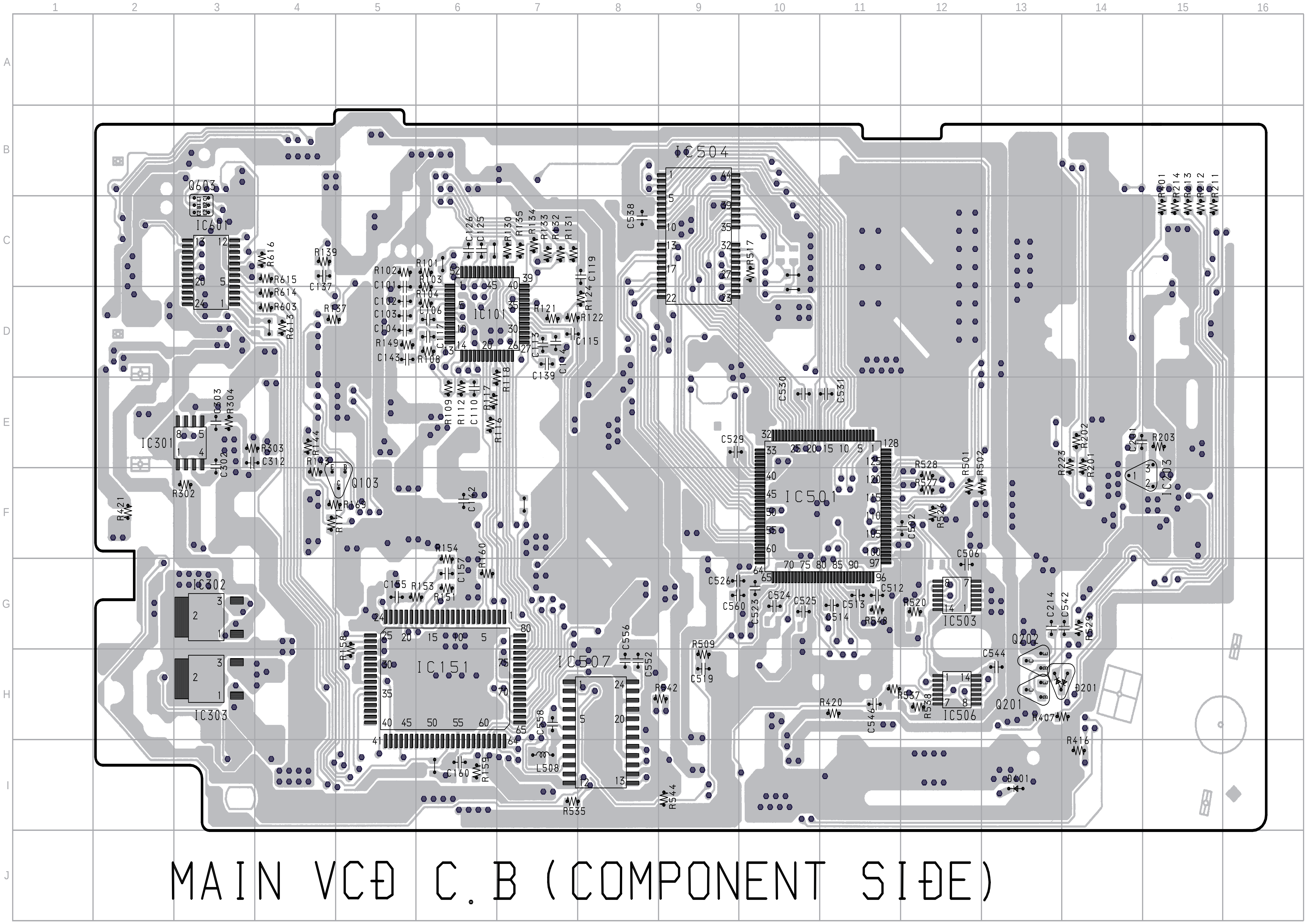
BLOCK DIAGRAM


MAIN VCD C.B
PICK UP ASSY KSS-213F
DRIVE C.B
LED C.B
T.T C.B
CN101
CN102
CN403
CN402
CN401
CN301
IC101 CXA1992AR SSP
IC102 BA5915FP SERVO DRIVER
IC151 CXD2540Q-1/2 DSP
IC201 μPD78016FGC MICRO PROCESSOR
IC202 GP1F32T
DIGITAL OUT (OPTICAL)
IC203 M51943ML
IC301 M5291FP
IC302 BA05FP
IC303 BA033FP
IC401 LB1644 MOTOR DRIVER
IC501 MPEG-1 VIDEO&AUDIO DECODER CL680
IC503 SN74LVU04APW
IC504 MSM54V16258B/BSL DRAM
IC505 LH53V2R00N-XX ROM
IC506 74LV74APW
1/2FREQ.DIVIDER (D-FLIP FLOP)
IC507 LC74781M OSD
IC601 SM5878M D/A CONV.
LD DRIVER Q101
SWITCH Q102
SWITCH Q103
AUDIO CD VCD GAIN SELECTION
FOR RADIAC BALANCE
SWITCH Q402
SWITCH Q401
SWITCH Q201, Q202 D201
SWITCH Q301
SWITCH Q302, Q303
DC-DC CONVERTER
5V REG
3.3V REG
MUTE CIRCUIT D601, Q602, Q603
VIDEO DRIV Q501, Q502
RIPPLE FILTER Q601
27MHz OSCILLATOR
X201 8MHz CER. RESONATOR
X601 16.9344MHz QUARTZ CRYSTAL
X501 27MHz
SWITCHING NETWORK
S401 TRAY OPEN SW
S402 TRAY CLOSE SW
SW201 NTSC AUTO PAL
M20 SPINDLE MOTOR
M21 SLED MOTOR
SW1 INSIDE LIMIT SWITCH
M101 (TRAY MOTOR)
M401 (DISH MOTOR)
PS401 GP1S53V
LED401
LED402
LED403
LED404
TRACKING
FOCUS
MAIN UNIT
TO/FROM MAIN UNIT
J501 VIDEO OUT
FILTER R100 C111, C112
FILTER R156, C154 C153
R150, C151 C152
FILTER L507, C536, C537
FILTER R217, C204, C205
FILTER R200, C210, C211
FILTER L301, C301
FILTER L302, C302
FILTER L506 C534 C535
FILTER R500 C508 C509
FILTER L502 C510 C511
FILTER L505 C532 C533
FILTER R509, R510, L503, L504 C518, C519, C520, C521
FILTER R605, R607, C613 C609, C611, C615
FILTER R606, R608, C614 C610, C612, C616
FILTER L508 C557, C558
NC
I/O BUSY
O-SD
O-CDLED
O-CLK
I-SD
I-SW
O-CLOSE
O-OPEN
O-DISH-F
O-DISH-R
O-DISH-S
VM
GND
CDON
ROUT
AGND
LOUT
VDD3
AVDD PLL
AVDD DAC
VDDMAX IN
VDDMAX OUT
AGND DAC
AGND PLL
VSS
COMP OUT
VCKIN
VDD MAXIN (5V)


16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
TO MAIN UNIT
CN403
TO DRIVE C.B
CN102
TO PICK UP ASSY
CN101
TO MAIN UNIT
CN301
S201
NTSC
AUTO PAL
PAL
J501
VIDEO OUT
CN402
DIGITAL OUT
(COAXIAL)
IC202
IC505
IC102
IC201
IC401
S401
S402
X201
X501
X601
M101
TRAY
MOTOR
CN401
TO T-T C.B
LED401-404
(CD WINDOW LIGHTING)
LED 401
LED 402
LED 403
LED 404
CON402

MAIN C.B VCD (CONDUCTOR SIDE)

LED C.B

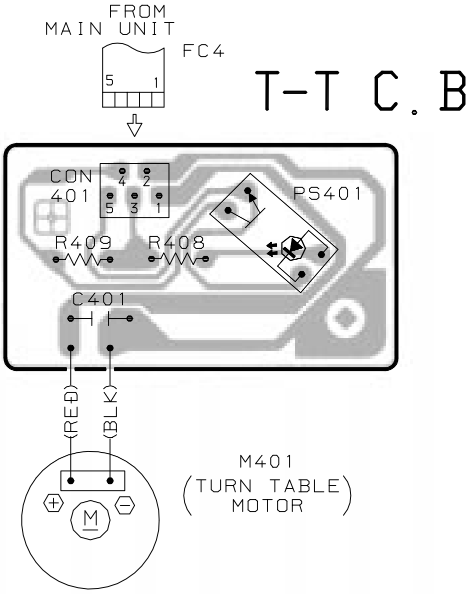

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
IC504
IC601
Q603
IC101
IC301
Q103
IC501
IC302
IC303
IC151
IC507
IC503
IC506
Q202
Q201
Q203
D201
D601
L508
R139
C137
R137
R616
R615
R614
R603
R613
R101
R102
R103
R104
C101
C102
C103
C104
C106
R149
C143
R108
C117
C126
C125
R130
R135
R134
R133
R132
R131
C119
R124
R121
R122
C113
C114
C115
C139
R109
R112
C110
R117
R116
R118
C538
R517
C530
C531
C529
R528
R527
R529
R501
R502
C532
C506
C526
C560
C523
C524
C525
C513
C514
C512
R520
R548
C303
R304
C302
R303
C312
R302
R144
R143
R163
R171
R421
C142
R154
R160
C157
C155
R153
R151
R158
C556
C552
R542
R509
C519
R420
C546
R557
R538
C544
C214
C542
R529
R223
R202
R201
C201
R203
R401
R214
R213
R212
R211
R407
R416
C558
C160
R159
R535
R544

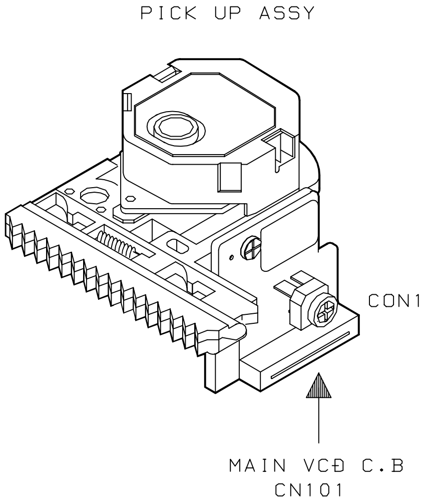
MAIN VCD C.B (COMPONENT SIDE)

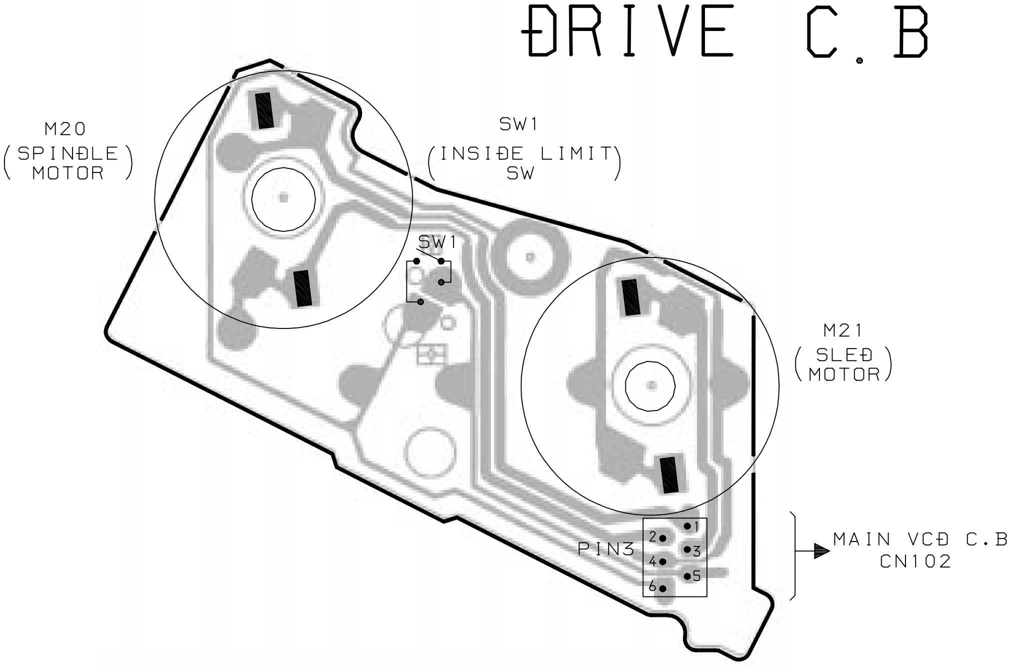
WIRING-3

1 2 3 4 5 6 7

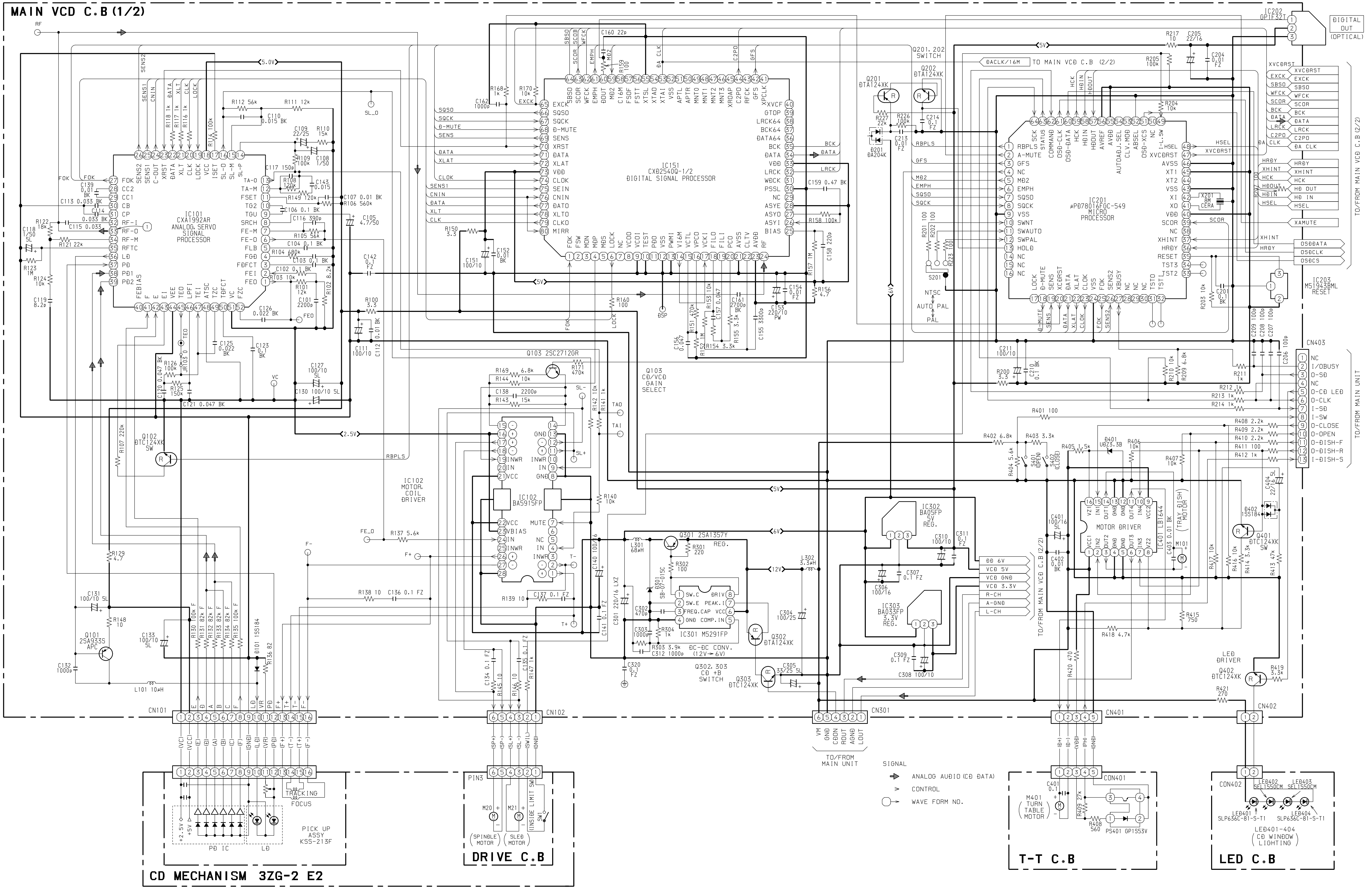
A B C D E F G H I J


T-T C.B
FROM MAIN UNIT
FC4
5
1
CON 401
4 2
5 3 1
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE MOTOR)
M

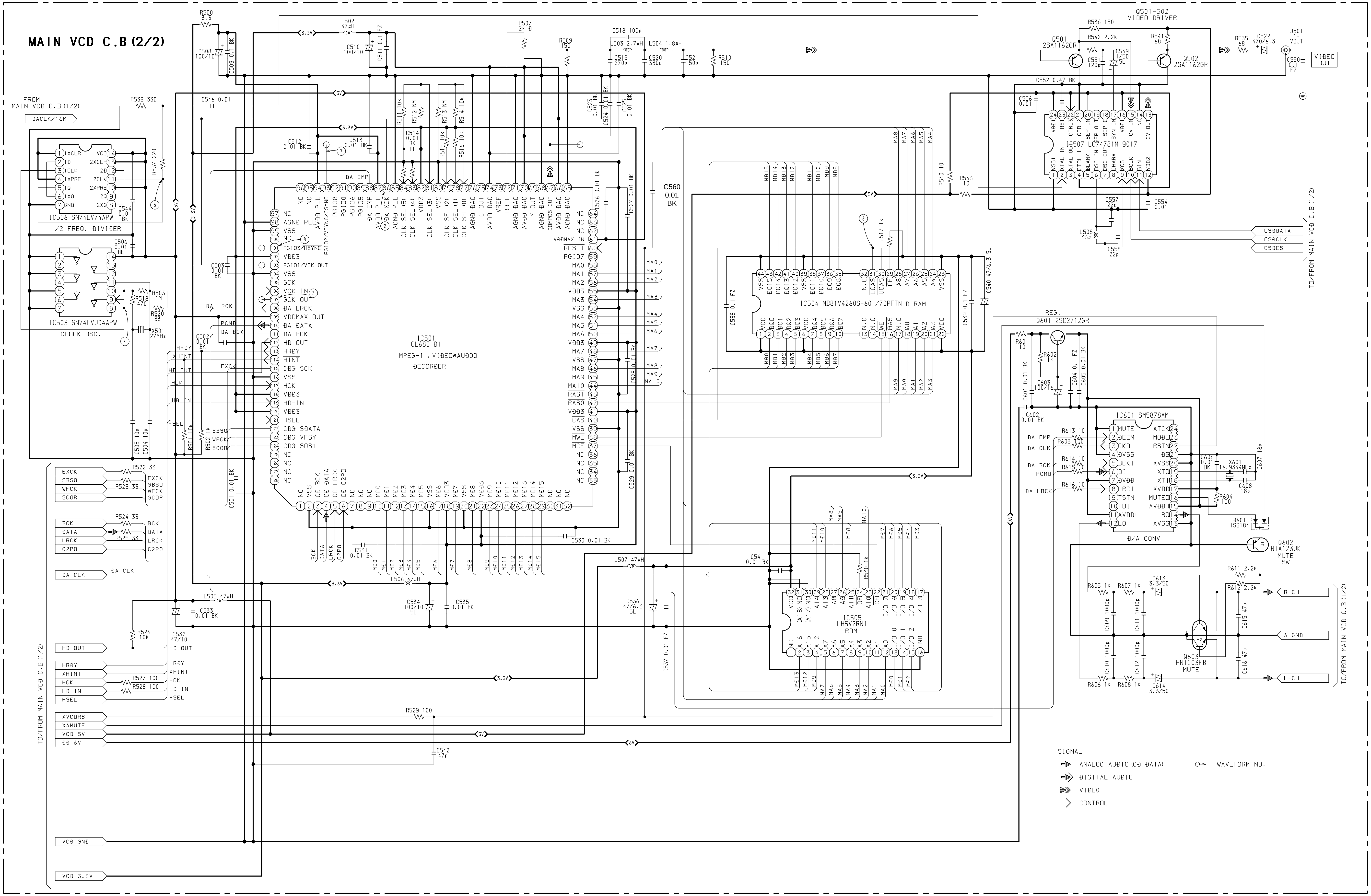

PICK UP ASSY
CON1
MAIN VCD C.B
CN101


DRIVE C.B
M20
(SPINDLE MOTOR)
SW1
(INSIDE LIMIT SW)
SW1
M21
(SLED MOTOR)
PIN3
1
2
3
4
5
6
MAIN VCD C.B
CN102

SCHEMATIC DIAGRAM-1

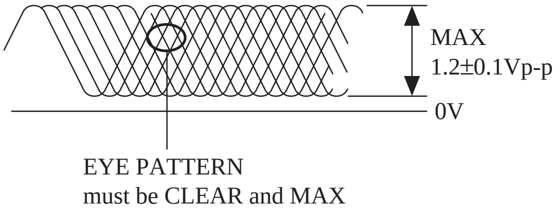

MAIN VCD C.B (1/2)
RF
IC101 CXA1992AR ANALOG SERVO SIGNAL PROCESSOR
IC151 CXD2540Q-1/2 DIGITAL SIGNAL PROCESSOR
IC201 µPD78016FGC-549 MICRO PROCESSOR
IC202 GP1F32T
DIGITAL OUT (OPTICAL)
Q201, 202 SWITCH
Q201 DTA124XK
Q202 DTA124XK
TO MAIN VCD C.B (2/2)
TO/FROM MAIN VCD C.B (2/2)
TO/FROM MAIN UNIT
IC203 M51943BML RESET
CN403
NC
I/OBUSY
O-SD
NC
O-CD LED
O-CLK
I-SD
I-SW
O-CLOSE
O-OPEN
O-DISH-F
O-DISH-R
I-DISH-S
Q103 2SC2712GR
Q103 CD/VCD GAIN SELECT
IC102 MOTOR COIL DRIVER
IC102 BA5915FP
Q102 DTC124XK SW
Q101 2SA933S APC
L101 10µH
Q301 2SA1357Y REG.
IC301 M5291FP
DC-DC CONV. (12V→6V)
Q302, 303 CD +B SWITCH
Q302 DTA124XK
Q303 DTC124XK
IC302 BA05FP 5V REG.
IC303 BA033FP 3.3V REG.
DD 6V
VCD 5V
VCD GND
VCD 3.3V
R-CH
A-GND
L-CH
TO/FROM MAIN VCD C.B (2/2)
IC401 LB1644 MOTOR DRIVER
M101 (TRAY DISH) MOTOR
Q401 DTC124XK SW
Q402 DTC124XK LED DRIVER
NTSC
AUTO PAL
PAL
S201
S401 OPEN
S402 CLOSE
5V
6V
12V
2.5V
5.0V
CN101
CN102
CN301
CN401
CN402
VM GND CDON ROUT AGND LOUT
TO/FROM MAIN UNIT
SIGNAL
ANALOG AUDIO (CD DATA)
CONTROL
WAVE FORM NO.
CD MECHANISM 3ZG-2 E2
TRACKING
FOCUS
PICK UP ASSY KSS-213F
PD IC
LD
DRIVE C.B
PIN3
M20 (SPINDLE MOTOR)
M21 (SLED MOTOR)
SW1 (INSIDE LIMIT SW)
T-T C.B
CON401
M401 TURN TABLE MOTOR
PS401 GP1S53V
LED C.B
CON402
LED402 SEL1550CM
LED403 SEL1550CM
LED401 SLP636C-81-5-T1
LED404 SLP636C-81-5-T1
LED401-404 (CD WINDOW LIGHTING)

SCHEMATIC DIAGRAM-2

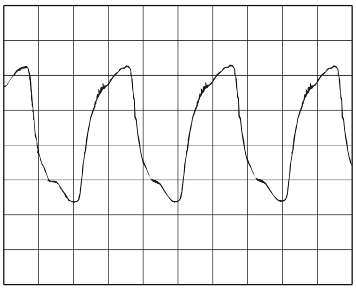

MAIN VCD C.B (2/2)
FROM MAIN VCD C.B (1/2)
DACLK/16M
R538 330
C546 0.01
R500 3.3
L502 47µH
C508 100/10
C509 0.1 BK
C510 100/10
C511 0.1 FZ
R507 2k D
R509 150
C518 100p
L503 2.7µH
L504 1.8µH
C519 270p
C520 330p
C521 150p
R510 150
C523 0.01 BK
C524 0.01 BK
C525 0.01 BK
Q501-502 VIDEO DRIVER
Q501 2SA1162GR
Q502 2SA1162GR
R536 150
R542 2.2k
R541 68
C551 120p
C549 1/50 SL
R535 68
C522 470/6.3
J501 1P VOUT
C550 0.1 FZ
VIDEO OUT
C552 0.47 BK
C556 0.01
IC507 LC74781M-9017
C557 22p
C554 0.01
L508 33µ
C558 22p
OSDDATA
OSDCLK
OSDCS
TO/FROM MAIN VCD C.B (1/2)
R540 10
R543 10
C560 0.01 BK
IC506 SN74LV74APW
1/2 FREQ. DIVIDER
R537 220
C544 0.01 BK
C506 0.01 BK
IC503 SN74LVU04APW
CLOCK OSC.
R503 1M
R518 470
R520 33
X501 27MHz
C512 0.01 BK
C513 0.01 BK
C514 0.01 BK
R511 10k
R512 NM
R513 NM
R514 10k
R515 10k
R516 10k
C503 0.01 BK
C502 0.01 BK
IC501 CL680-01
MPEG-1, VIDEO&AUDIO DECORDER
C526 0.01 BK
C527 0.01 BK
C528 0.01 BK
C529 0.01 BK
C501 0.01 BK
C530 0.01 BK
C531 0.01 BK
C505 10p
C504 10p
R501 10k
R502 1k
IC504 MB81V4260S-60/70PFTN D RAM
R517 1k
C538 0.1 FZ
C539 0.1 FZ
C540 47/6.3 SL
REG.
Q601 2SC2712GR
R601 10
R602 1k
C601 0.01 BK
C603 100/16
C604 0.1 FZ
C605 0.01 BK
C602 0.01 BK
IC601 SM5878AM
D/A CONV.
R613 10
R603 100
R614 10
R615 10
R616 10
C606 0.01 BK
X601 16.9344MHz
C607 18p
C608 18p
R604 100
D601 1SS184
Q602 DTA123JK MUTE SW
R611 2.2k
R612 2.2k
R605 1k
R607 1k
C613 3.3/50
C609 1000p
C611 1000p
C615 47p
C610 1000p
C612 1000p
C616 47p
Q603 HN1C03FB MUTE
R606 1k
R608 1k
C614 3.3/50
R-CH
A-GND
L-CH
EXCK
SBSO
WFCK
SCOR
R522 33
R523 33
BCK
DATA
LRCK
C2PO
R524 33
R525 33
DA CLK
L505 47µH
C533 0.01 BK
C532 47/10
R526 10k
HD OUT
HRDY
XHINT
HCK
HD IN
HSEL
R527 100
R528 100
XVCDRST
XAMUTE
VCD 5V
DD 6V
R529 100
C542 47p
VCD GND
VCD 3.3V
L506 47µH
C534 100/10 SL
C535 0.01 BK
L507 47µH
C536 47/6.3 SL
C537 0.01 FZ
C541 0.01 BK
R530 1k
IC505 LH5V2RN1 ROM
3.3V
5V
6V
SIGNAL
ANALOG AUDIO (CD DATA)
DIGITAL AUDIO
VIDEO
CONTROL
WAVEFORM NO.

WAVE FORM

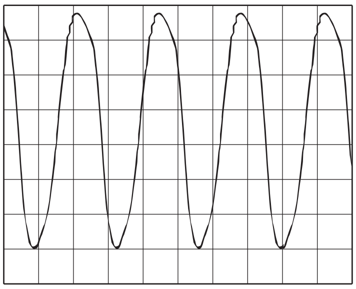
①
IC101 Pin ㉝ (RF-O)
VOLT/DIV: 200mV
TIME/DIV: 0.5µS



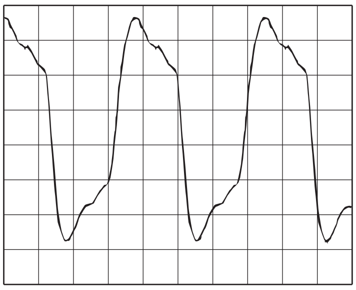
②
IC501 Pin (86) DA XCK
16.93MHz
VOLT/DIV: 1V
TIME/DIV: 20nS



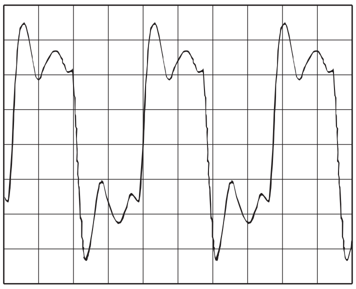
③
IC501 Pin (107) GCK OUT
42.3MHz
VOLT/DIV: 1V
TIME/DIV: 10nS



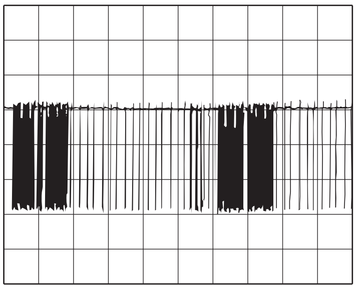
④
IC503 Pin ⑧ 33 VCK
27MHz±1.35kHz
VOLT/DIV: 1V
TIME/DIV: 10nS



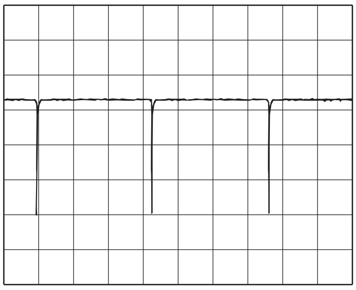
⑤
IC506 Pin ⑪ OSD CLK
13.5MHz±675Hz
VOLT/DIV: 1V
TIME/DIV: 20nS



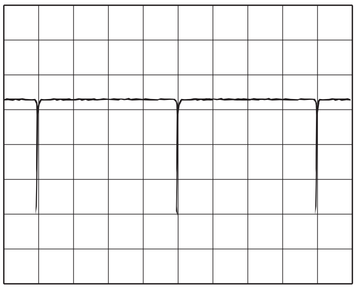
⑥
IC504 Pin ㉚ $\overline{\text{UCAS}}$
(Pin ㉛ $\overline{\text{LCAS}}$)
VOLT/DIV: 1V
TIME/DIV: 2µS



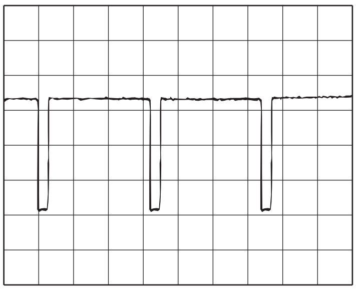
⑦
IC501 Pin (93) $\overline{\text{VSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 5mS



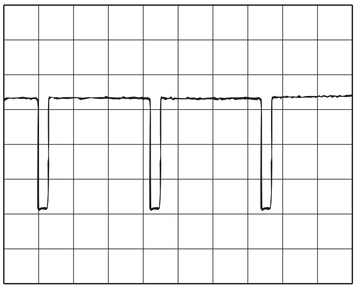
⑧
IC501 Pin (93) $\overline{\text{VSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 5mS



⑧
IC501 Pin (101) $\overline{\text{HSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 20µS



IC501 Pin (101) $\overline{\text{HSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 20µS



IC DESCRIPTION
IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC		
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS		GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS		Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD		Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC		
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD		Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two’s complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two’s complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS		GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD		Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two’s complement output, and the 48-bit slot is an MSB first, two’s complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136µ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, CL680

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground.
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT.
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out.
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O.
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC}}$/$\overline{\text{CSYNC}}$	O	$\overline{\text{VSYNC}}$/$\overline{\text{CSYNC}}$ output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock.
96	PROC_CK	O	Processor clock.
97	AUD_XCK	O	Audio XCK.
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz)
106	VCK	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG DATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output.
126-128	NC	—	No connection.

IC, LC74781M

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X’tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X’tal generator mode is selected by this selector terminal. L: X’tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{\text{RST}}$ terminal = L), the X’tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{\text{RST}}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	$\overline{\text{CS}}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.

Pin No.	Pin Name	I/O	Description
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input).
24	VDD1	—	Power supply. (+5V digital power supply).

IC, µPD78016FGC

Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	I	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L*3sec=STOP).
14	NC	—	Nou used.
15	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
16	NC	—	Nou used.
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H).
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	NC	—	Nou used.
29	NC	—	
30	NC	—	
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	HINT FROM CL680.
38	NC	—	Nou used.
39	SCOR	I	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

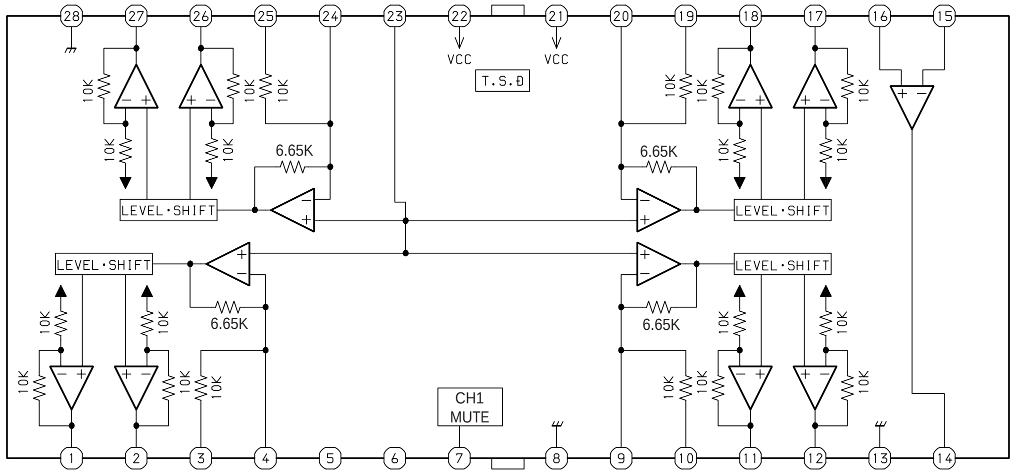
Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	GND.
44	XT2	—	Nou used.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW.
50	NC	—	Nou used.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N).
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON).
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN TO CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

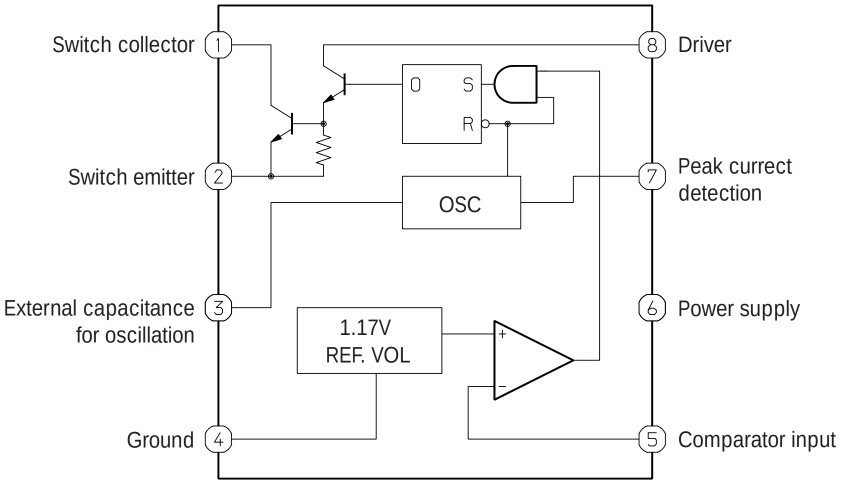
IC BLOCK DIAGRAM

IC, BA5915FP

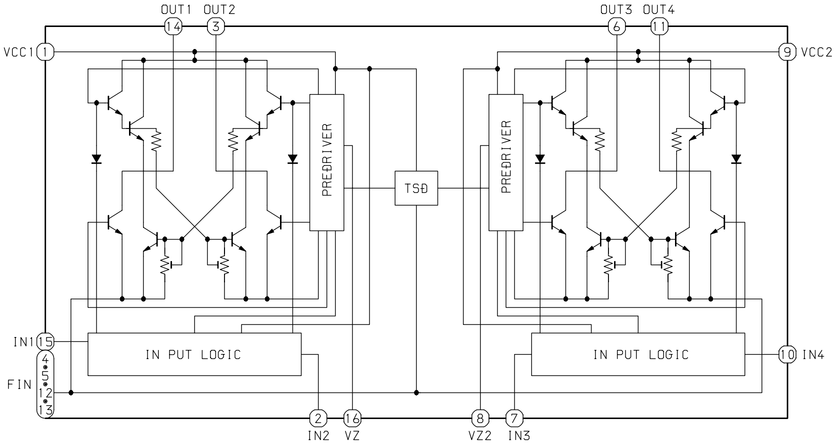

28
27
26
25
24
23
22
21
20
19
18
17
16
15
VCC
VCC
T.S.D
10K
6.65K
LEVEL·SHIFT
CH1
MUTE
1
2
3
4
5
6
7
8
9
10
11
12
13
14

T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, M5291FP


Switch collector
1
Switch emitter
2
External capacitance
for oscillation
3
Ground
4
8
Driver
7
Peak currect
detection
6
Power supply
5
Comparator input
D
S
R
OSC
1.17V
REF. VOL
+
−

IC, LB1644


OUT1
OUT2
14
3
OUT3
OUT4
6
11
VCC1
1
9
VCC2
PREDRIVER
TSD
PREDRIVER
IN1
15
FIN
4
5
12
13
IN PUT LOGIC
IN PUT LOGIC
10
IN4
2
16
8
7
IN2
VZ
VZ2
IN3

TRUH TABLE

IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
0	0	L	L	0	0	L	L
1	0	H	L	1	0	H	L
0	1	L	H	0	1	L	H
1	1	L	L	1	1	L	L

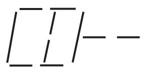
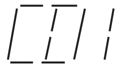
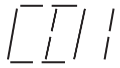
INPUT			OUTPUT				MODE	
IN1	IN2.3	IN4	OUT1	OUT2	OUT3	OUT4	M1	M2
0	0	0	L	L	L	L	BRAKE	BRAKE
1	0	0	H	L	L	L	FF/REW	BRAKE
0	1	1	L	H	L	L	REW/FF	BRAKE
1	1	0	L	L	H	L	BRAKE	FF/REW
0	0	1	L	L	L	H	BRAKE	REW/FF
1	1	1	L	L	L	L	BRAKE	BRAKE

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

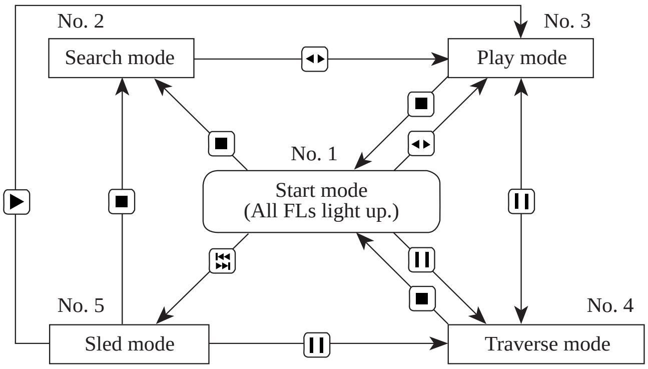
Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	TEST□□ □□ □□ Flashes repeatdly	• Test mode is activated. • CD block power is ON.	• Test mode
Search mode No.2	■ key		• Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀▶key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check FOK/FZC
Traverse mode No.4	❚❚ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

* NOTE 2: Do not press the ⏮or ⏭keys when the machine is in the ❚❚ status is active. If they are pressed, playback will not be possible after the ❚❚ status has been canceled. If the ⏮or ⏭keys are pressed in the ❚❚status, press the ■key and return to the start mode (No.1).

* NOTE 3: When pressing the ⏮or ⏭keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



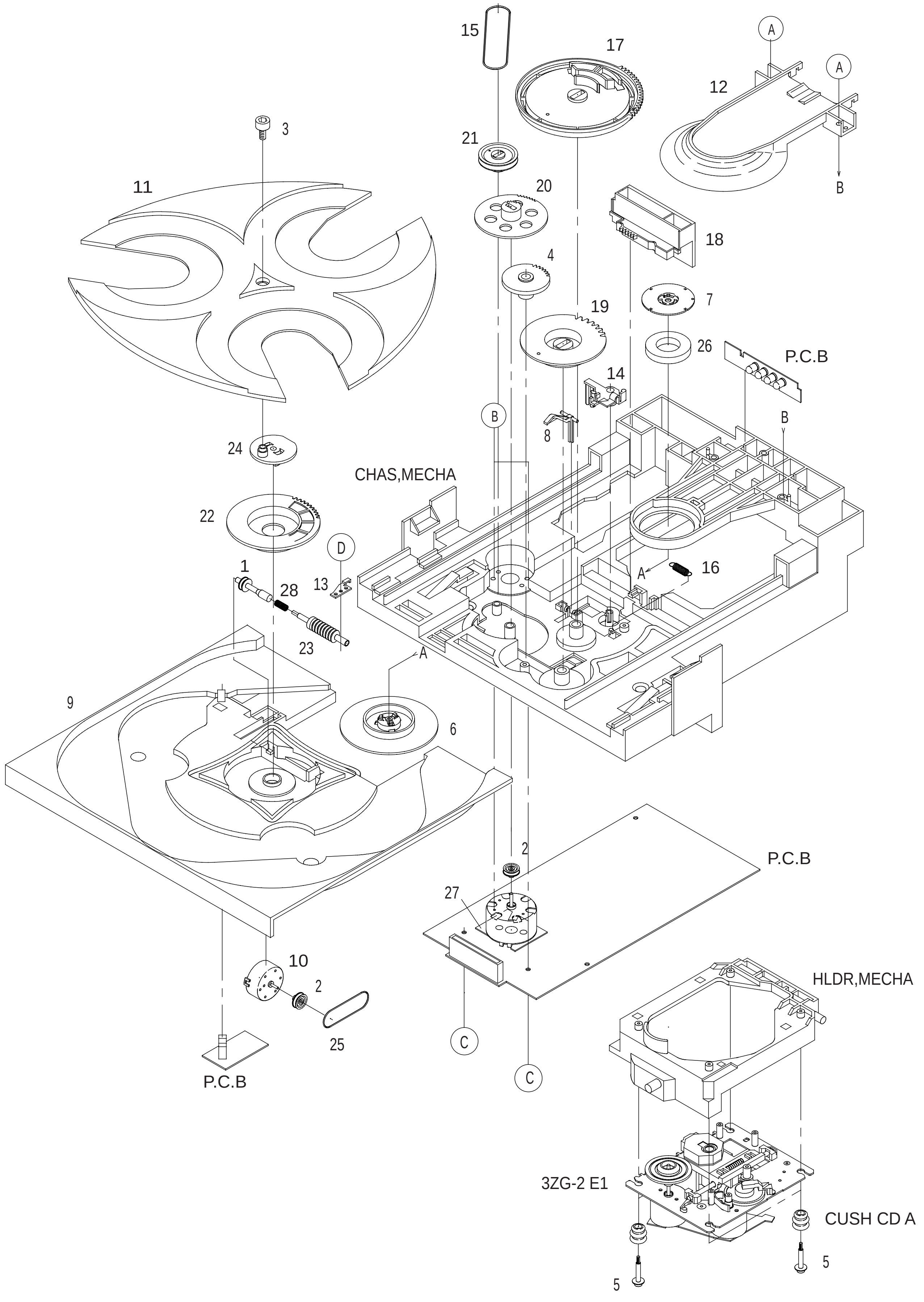
If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

5. How to check the Automatic Adjustment Values
   The automatic adjustment values can be checked by pressing the square (■) button.
   FL display (displayed in hexadecimal values)

** ** **
Tracking balance (00-0F)
Tracking gain (00-0C)
Focus bias (10-2F)

Note) The reference value is “20 08 08”.

MECHANICAL EXPLODED VIEW 1/1

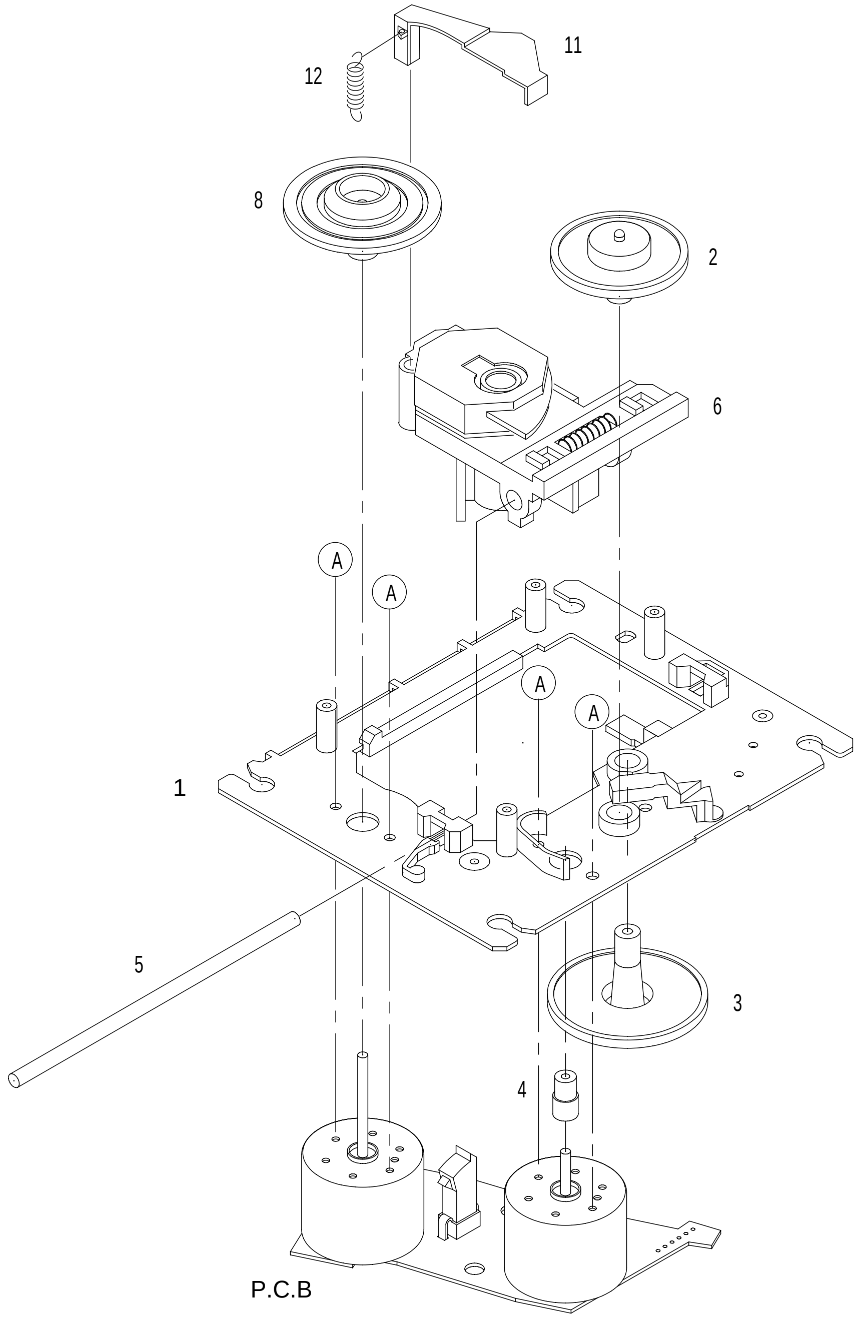

15
17
A
A
12
3
21
B
11
20
18
4
7
19
26
P.C.B
14
B
B
8
24
CHAS,MECHA
22
D
A
16
1
13
28
23
A
9
6
2
P.C.B
27
10
HLDR,MECHA
2
25
C
C
P.C.B
3ZG-2 E1
CUSH CD A
5
5

MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-239-210		PULLY,WORM N
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	81-ZG1-239-010		S-SCREW,TT
4	81-ZG1-291-110		GEAR,TRAY RELAY NO3
5	81-ZG1-271-010		S-SCREW MECH REAR
6	81-ZG1-277-310		HLDR,MAGNET N
7	81-ZG1-255-110		PLATE,MAGNET MK2
8	83-ZG3-213-010		LVR,SW
9	84-ZG1-003-310		TRAY,NO2-B
10	87-045-364-010		MOTOR(BCH3B14)
11	84-ZG1-005-210		TURNTABLE,NO1(*)
12	84-ZG1-011-010		REFLECTOR,CD
13	84-ZG1-259-010		SPR-P,WORM
14	84-ZG1-208-210		LEVER,CAM
15	84-ZG1-209-010		BELT,SQ1.8-117.7
16	84-ZG1-211-010		SPR-E CAM S
17	84-ZG1-215-410		GEAR,MAIN CAM BLU
18	84-ZG1-216-310		SLIDE,MECHA CAM YEL
19	84-ZG1-205-110		GEAR,TRAY
20	84-ZG1-206-110		GEAR,RELAY
21	84-ZG1-207-010		PULLEY,RELAY
22	84-ZG1-221-010		GEAR,MAIN TT
23	84-ZG1-238-010		GEAR,WORM N
24	84-ZG1-224-010		LEVER,TT
25	84-ZG1-225-010		BELT,SQ1.0-63.3
26	83-ZG3-602-010		RING,MAG
27	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
28	84-ZG1-248-010		SPR-C,WORM
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-251-070-410		U+2.6-3
C	87-342-036-210		UT2+2-8
D	87-067-981-010		BVT2+3-6 BLK

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E1)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E1)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

USE MODEL LIST

CX-NAK572
CX-NK270
CX-NK290
CX-NK370
CX-NK570
CX-NK765
CX-NK770
CX-NK970
DX-SNKH100

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G—　—	
G—　—	
G—　—	

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